Operating System/2™ Programming Tools and Information Version 1.2

Presentation Manager COBOL/2 Bindings Reference

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Operating System/2™
Programming Tools
and Information
Version 1.2

Presentation Manager COBOL/2 Bindings Reference

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Library Structure

OS/2 Product

IBM Operating System/2
Standard Edition
Version 1.2

Getting Started
Using Advanced Features
Product Information

6024926 3.5″ diskette
6024930 5.25″ diskette

OS/2 Programming Tools and Information

IBM Operating System/2
Version 1.2

Installation
Programming Overview
Programming Guide
Building Programs
Dialog Tag Language Guide and Reference
Dialog Manager Guide and Reference
Dialog Manager and Dialog Tag Language Reference Summary
Programming Reference (3 books)
Bindings Reference for Presentation Manager (4 books for COBOL/2, FORTRAN/2, C/2, and Macro Assembler/2)
I/O Subsystems and Device Support (2 books)
Systems Application Architecture
Common User Access: Advanced Interface Design Guide

6024929

Separate Order (no charge)

Keyboards and Code Pages

6280345

Available Separately

Command Reference

6024928

Service Coordinator's Guide

15F2214

Programming Languages

IBM Basic Compiler/2
Version 1.0 6280179

IBM Macro Assembler/2
Version 1.0 6280181

IBM Pascal Compiler/2
Version 1.0 6280183

IBM FORTRAN/2
Version 1.02 6280185

IBM COBOL/2
Version 1.0 6280207

IBM C/2
Version 1.1 6280284

Systems Application Architecture

An Overview

GC26-4341

Writing Applications: A Design Guide

SC26-4362

Common User Access: Advanced Interface Design Guide
SC26-4582

Common User Access: Basic Interface Design Guide
SC26-4583

Common Programming Interface

C Reference - Level 2

SC09-1308

COBOL Reference

SC26-4354

Dialog Reference

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Chapter 1. Introduction

This book describes the Operating System/2 (OS/2) Version 1.2 language binding for IBM COBOL/2.

It provides language-dependent information about the functions described in the OS/2 Version 1.2 *Presentation Manager Programming Reference*.

The information in this book, together with the functional descriptions detailed in the *Presentation Manager Programming Reference*, enable the user to generate call statements in COBOL.

The following information is provided:

- The syntax for each data type and structure
- The parameter list for each call.

Note: Calls are listed in alphabetic order of C name, as in the *Presentation Manager Programming Reference*.

COBOL Coding Techniques

Data structures

Data structures are organized using the native COBOL structure support. A set of COPY files is provided, one for each structure. The first item in the structure is declared with a level number of 10; the application must provide a declaration for the level 01 item, before using the COPY statement to include the definition of the rest of the structure (see example below).

The name of each component in a structure is prefixed with the name of the structure datatype. The prefix is abbreviated where necessary so as to comprise no more than 8 characters.

The COPY file for the *QMSG* structure is shown below:

```
*** QMSG structure
    10 QMSG-BLOCK.
***   Window handle
       15 QMSG-HWND    PIC S9(9) USAGE BINARY.
***   Message identity
       15 QMSG-MSGID   PIC S9(9) USAGE BINARY.
***   Parameter 1
       15 QMSG-PARAM1  PIC S9(9) USAGE BINARY.
***   Parameter 2
       15 QMSG-PARAM2  PIC S9(9) USAGE BINARY.
***   Message time
       15 QMSG-TIME    PIC S9(9) USAGE BINARY.
***   Pointer position when message was generated
       15 QMSG-POINT.
         20 QMSG-X     PIC S9(9) USAGE BINARY.
         20 QMSG-Y     PIC S9(9) USAGE BINARY.
```

This could be used as follows:

```
* Declare multiple instances of structure
  01 MY-QMSG1.
     COPY QMSG.
  01 MY-QMSG2.
     COPY QMSG.
*
* Modify or use values in required instance
  MOVE 99 TO QMSG-MSGID IN MY-QMSG1.
```

For those structures containing a table with a variable number of elements (for example, the *ACCELTABLE* structure), the COPY file uses a COBOL word to represent the number of elements in the table (for example, ACCELTAB-DIM). The application must specify the actual number of elements required by means of the REPLACING phrase of the COPY statement:

```
* Copy structure definition, specifying table-size required
     COPY ACCELTAB REPLACING ACCELTAB-DIM BY 8.
```

Miscellaneous Definitions

The following definitions are provided in the COBOL constants file:

```
77 FALSE-VALUE  VALUE IS 0.
77 TRUE-VALUE   VALUE IS 1.
77 NULL         VALUE IS 0.
```

Notation Conventions

Interdependent Parameters

Where the size of one parameter is dependent on another, the binding shows the dependent parameter with its size given by a name in lower case; this is the name of the parameter which controls the size. In an actual application, an appropriate literal value must appear here. The dependent parameter must be declared with an explicit size, and the size parameter must not exceed this value.

The following example, (the WinCreateDataStructure call) shows how a table and a character string are represented:

```
* Number of elements
  77 COUNT      PIC S9(9) USAGE BINARY.
* Datatype codes
  01 TYPES-ARRAY.
     02 TYPES   PIC S9(9) USAGE BINARY OCCURS count TIMES.
* Length of input structure
  77 INLEN      PIC S9(9) USAGE BINARY.
* Input structure
  77 INSTRUC    PIC X(inlen).
```

In this example, the word 'count' in lower case indicates that the current value of the variable COUNT must not exceed the number of elements declared for the table TYPES. The word 'inlen' in lower case indicates that the current value of the variable INLEN must not exceed the declared length of the character string INSTRUC.

Maximum Name Length

Where necessary, names are truncated to the first 30 characters.

The Datatype Mapping Symbol

For some parameters the 'comment' text contains a string such as:

(STRL→**HSTRUCT**)

This indicates that the standard datatype *STRL* maps to (i.e. is represented by, in this binding) the datatype *HSTRUCT*, for the parameter indicated.

Utility Functions

Eleven utility functions are provided to assist with the construction and analysis of datatypes.

Structure Utilities

The following utilities allow data structures in the standard format to be created, queried, and destroyed; such structures are always referenced by a handle (*HSTRUCT*):

WinCreateDataStructure

WinModifyDataStructure

WinQueryDataStructure

WinDestroyDataStructure

WinFreeMsg.

Composed-Integer Utilities

The following utilities allow composed 4-byte integers to be set and queried (*COMPOSED*, *FIXED* and some instances of *MPARAM* and *MRESULT*):

WinSetValue

WinQueryValue.

Bit Utilities

The following utilities allow bit values to be set and queried (datatypes *BIT8*, *BIT16*, and *BIT32*):

WinSetBitsUnderMask

WinQueryBitsUnderMask

WinSetBits

WinQueryBits.

Chapter 2. Data Types

ACCEL Accelerator structure.

```
*** ACCEL structure
  10 ACCEL-BLOCK.
***   Options
    15 ACCEL-OPTIONS   PIC S9(9) USAGE BINARY.
***   Key
    15 ACCEL-KEY       PIC S9(9) USAGE BINARY.
***   Command code
    15 ACCEL-CMD       PIC S9(9) USAGE BINARY.
```

ACCELTABLE Accelerator-table structure.

```
*** ACCELTAB structure
  10 ACCELTAB-BLOCK.
***   Number of accelerator entries
    15 ACCELTAB-COUNT     PIC S9(9) USAGE BINARY.
***   Code page for accelerator entries
    15 ACCELTAB-CODEPAGE  PIC S9(9) USAGE BINARY.
***   Accelerator entries
    15 ACCELTAB-ACCEL     OCCURS 0 TO ACCELTAB-DIM TIMES
                          DEPENDING ON ACCELTAB-COUNT.
***   Options
      20 ACCELTAB-OPTIONS   PIC S9(9) USAGE BINARY.
***   Key
      20 ACCELTAB-KEY       PIC S9(9) USAGE BINARY.
***   Command code
      20 ACCELTAB-CMD       PIC S9(9) USAGE BINARY.
```

ARCPARAM Arc-parameters structure.
(Maps via ARCPARAMS)

ARCPARAMS Arc-parameters structure.

```
*** ARCPARML structure
  10 ARCPARML-BLOCK.
***   P coefficient
    15 ARCPARML-P   PIC S9(9) USAGE BINARY.
***   Q coefficient
    15 ARCPARML-Q   PIC S9(9) USAGE BINARY.
***   R coefficient
    15 ARCPARML-R   PIC S9(9) USAGE BINARY.
***   S coefficient
    15 ARCPARML-S   PIC S9(9) USAGE BINARY.
```

AREABUNDLE Area-attributes bundle structure.

```
*** AREABUN structure
  10 AREABUN-BLOCK.
***    Area foreground color
    15 AREABUN-COLOR        PIC S9(9) USAGE BINARY.
***    Area background color
    15 AREABUN-BACKCOLOR    PIC S9(9) USAGE BINARY.
***    Area foreground-mix mode
    15 AREABUN-MIXMODE      PIC S9(9) USAGE BINARY.
***    Area background-mix mode
    15 AREABUN-BACKMIXMODE  PIC S9(9) USAGE BINARY.
***    Pattern set
    15 AREABUN-SET          PIC S9(9) USAGE BINARY.
***    Pattern symbol
    15 AREABUN-SYMBOL       PIC S9(9) USAGE BINARY.
***    Pattern reference point
    15 AREABUN-REFPOINT.
      20 AREABUN-X          PIC S9(9) USAGE BINARY.
      20 AREABUN-Y          PIC S9(9) USAGE BINARY.
```

ATOM Atom identity.

```
PIC S9(9) USAGE BINARY
```

BANDRECT Rectangle structure, used for the coordinates of an output band (see DevEscape).

An empty rectangle is one for which **xleft** is greater than **xright**, or **ybottom** is greater than **ytop**.

```
*** BANDRECT structure
  10 BANDRECT-BLOCK.
***    x coordinate of left edge of rectangle
    15 BANDRECT-XLEFT    PIC S9(9) USAGE BINARY.
***    y coordinate of bottom edge of rectangle
    15 BANDRECT-YBOTTOM  PIC S9(9) USAGE BINARY.
***    x coordinate of right edge of rectangle
    15 BANDRECT-XRIGHT   PIC S9(9) USAGE BINARY.
***    y coordinate of top edge of rectangle
    15 BANDRECT-YTOP     PIC S9(9) USAGE BINARY.
```

BITMAPINFO Bit-map information structure.

Each bit plane logically contains (**bitmapwidth*bitmapheight*bitcount**) bits, although the actual length can be greater because of padding.

```
*** BITINF structure
  10 BITINF-BLOCK.
***    Length of fixed portion of structure
   15 BITINF-LENGTH        PIC S9(9) USAGE BINARY.
***    Bit-map width in pels
   15 BITINF-BITMAPWIDTH   PIC S9(9) USAGE BINARY.
***    Bit-map height in pels
   15 BITINF-BITMAPHEIGHT  PIC S9(9) USAGE BINARY.
***    Number of bit planes
   15 BITINF-PLANES        PIC S9(9) USAGE BINARY.
***    Number of bits per pel within a plane
   15 BITINF-BITCOUNT      PIC S9(9) USAGE BINARY.
***    Array of RGB values
   15 BITINF-COLOR         OCCURS BITINF-DIM TIMES.
***    Blue component of the color definition
     20 BITINF-BLUE          PIC X.
***    Green component of the color definition
     20 BITINF-GREEN         PIC X.
***    Red component of the color definition
     20 BITINF-RED           PIC X.
```

BITMAPINFOHEADER Bit-map information header structure.

Each bit plane logically contains (**bitmapwidth*bitmapheight*bitcount**) bits, although the actual length can be greater because of padding.

```
*** BITINFH structure
  10 BITINFH-BLOCK.
***    Length of structure
   15 BITINFH-LENGTH        PIC S9(9) USAGE BINARY.
***    Bit-map width in pels
   15 BITINFH-BITMAPWIDTH   PIC S9(9) USAGE BINARY.
***    Bit-map height in pels
   15 BITINFH-BITMAPHEIGHT  PIC S9(9) USAGE BINARY.
***    Number of bit planes
   15 BITINFH-PLANES        PIC S9(9) USAGE BINARY.
***    Number of bits per pel within a plane
   15 BITINFH-BITCOUNT      PIC S9(9) USAGE BINARY.
```

BIT8 Defines eight independent BOOL values.

```
PIC S9(9) USAGE BINARY
```

BIT16 Defines 16 independent BOOL values.

```
PIC S9(9) USAGE BINARY
```

BIT32 Defines 32 independent BOOL values.

```
PIC S9(9) USAGE BINARY
```

BOOL

Boolean.

The *BOOL* data type is defined such that any nonzero value indicates TRUE-VALUE, and a zero value indicates FALSE-VALUE.

The constants TRUE-VALUE and FALSE-VALUE have been defined as 1 and 0 respectively. The constant TRUE-VALUE should never be used in an equality comparison with a *BOOL* as this may result in incorrect results.

When an application needs to pass a TRUE value on a call, it is recommended that it passes the value TRUE-VALUE, which is 1, and not any nonzero value.

```
PIC S9(9) USAGE BINARY
```

BTNCDATA

Button-control-data structure.

```
*** BTNCDATA structure
  10 BTNCDATA-BLOCK.
***   Length of the control data in bytes
    15 BTNCDATA-LENGTH      PIC S9(9) USAGE BINARY.
***   Check state of button
    15 BTNCDATA-CHECKSTATE  PIC S9(9) USAGE BINARY.
***   Highlighting state of button
    15 BTNCDATA-HILITE      PIC S9(9) USAGE BINARY.
```

BUFFER

Buffer.
(Maps via STR)

BUNDLE

Bundle data area. It is overlaid by one of these attribute bundle structures:

AREABUNDLE
CHARBUNDLE
IMAGEBUNDLE
LINEBUNDLE
MARKERBUNDLE .

BYTE

Byte.

```
PIC X
```

CHAR

Single-byte character.

A 1-character CHAR maps to `PIC X`.

Otherwise an n-character CHAR is represented by the pair of values:

```
Length:  PIC S9(9) USAGE BINARY
String:  PIC X(n)
```

CHARBUNDLE Character-attributes bundle structure.

```
*** CHARBUN structure
  10 CHARBUN-BLOCK.
***   Character foreground color
    15 CHARBUN-COLOR        PIC S9(9) USAGE BINARY.
***   Character background color
    15 CHARBUN-BACKCOLOR    PIC S9(9) USAGE BINARY.
***   Character foreground-mix mode
    15 CHARBUN-MIXMODE      PIC S9(9) USAGE BINARY.
***   Character background-mix mode
    15 CHARBUN-BACKMIXMODE  PIC S9(9) USAGE BINARY.
***   Character set
    15 CHARBUN-SET          PIC S9(9) USAGE BINARY.
***   Character precision
    15 CHARBUN-PRECISION    PIC S9(9) USAGE BINARY.
***   Character cell size
    15 CHARBUN-CELL.
      20 CHARBUN-WIDTH      PIC S9(9) USAGE BINARY.
      20 CHARBUN-HEIGHT     PIC S9(9) USAGE BINARY.
***   Character angle
    15 CHARBUN-ANGLE.
      20 CHARBUN-X          PIC S9(9) USAGE BINARY.
      20 CHARBUN-Y          PIC S9(9) USAGE BINARY.
***   Character shear
    15 CHARBUN-SHEAR.
      20 CHARBUN-X-2        PIC S9(9) USAGE BINARY.
      20 CHARBUN-Y-2        PIC S9(9) USAGE BINARY.
***   Character direction
    15 CHARBUN-DIRECTION    PIC S9(9) USAGE BINARY.
```

CLASSINFO Class-information structure.

```
*** CLASSINF structure
  10 CLASSINF-BLOCK.
***   Class-style flags
    15 CLASSINF-STYLE       PIC S9(9) USAGE BINARY.
***   Window procedure
    15 CLASSINF-WINDOWPROC  PIC S9(9) USAGE BINARY.
***   Number of additional window words
    15 CLASSINF-EXTRA       PIC S9(9) USAGE BINARY.
```

COMPOSED A 4-byte value that is composed by the concatenation of values of other data types.

For example, it could be composed of two values, one of which has a data type of *SHORT* and the other a data type of *USHORT*.

```
PIC S9(9) USAGE BINARY
```

COUNT2 Count in the range 0 through 65 535.

```
PIC S9(9) USAGE BINARY
```

COUNT2B Count of bytes, in the range 0 through 65 535.

```
PIC S9(9) USAGE BINARY
```

COUNT2CH Count of characters, in the range 0 through 65 535.

```
PIC S9(9) USAGE BINARY
```

COUNT4

Count in the range 0 through 2 147 483 647.

```
PIC S9(9) USAGE BINARY
```

COUNT4B

Count of bytes, in the range 0 through 2 147 483 647.

```
PIC S9(9) USAGE BINARY
```

CPID

Code-page identity.

```
PIC S9(9) USAGE BINARY
```

CREATEPARAMS

Create parameters structure.

This structure can be used to format the application-defined data area used in the WinCreateDialog, the WinLoadDialog, and the WinDialogBox calls in order to conform to SAA.
(HSTRUCT: Use composition or decomposition functions.)

CREATESTRUCT

Create-window data structure.

```
*** CRTSTRUC structure
  10 CRTSTRUC-BLOCK.
***    Presentation parameters. (PRESDATA→HSTRUCT)
   15 CRTSTRUC-PRESPARAMS      PIC S9(9) USAGE BINARY.
***    Control data. (CTLDATA→HSTRUCT)
   15 CRTSTRUC-CTLDATA         PIC S9(9) USAGE BINARY.
***    Window identifier
   15 CRTSTRUC-WINDOWIDENTITY  PIC S9(9) USAGE BINARY.
***    Window behind which the window is to be placed
   15 CRTSTRUC-BEHIND          PIC S9(9) USAGE BINARY.
***    Window owner
   15 CRTSTRUC-OWNER           PIC S9(9) USAGE BINARY.
***    Window height
   15 CRTSTRUC-CY              PIC S9(9) USAGE BINARY.
***    Window width
   15 CRTSTRUC-CX              PIC S9(9) USAGE BINARY.
***    y coordinate of origin
   15 CRTSTRUC-Y               PIC S9(9) USAGE BINARY.
***    x coordinate of origin
   15 CRTSTRUC-X               PIC S9(9) USAGE BINARY.
***    Window style
   15 CRTSTRUC-STYLE           PIC S9(9) USAGE BINARY.
***    Window text. (STRL→HSTRUCT)
   15 CRTSTRUC-TEXT            PIC S9(9) USAGE BINARY.
***    Registered window class name. (STRL→HSTRUCT)
   15 CRTSTRUC-CLASSNAME       PIC S9(9) USAGE BINARY.
***    Parent window handle
   15 CRTSTRUC-PARENT          PIC S9(9) USAGE BINARY.
```

CTLDATA

Class-specific control data, beginning with a value conforming to a *COUNT2B* data type, which specifies the overall length of the data.

The following are cases of this data type:

BTNCDATA	Button control data.
ENTRYFDATA	Entry field control data.
FRAMECDATA	Frame control data.
SBCDATA	Scroll bar control data.
MLECDATA	Multi-line entry field control data.

(HSTRUCT: Use composition or decomposition functions.)

CURSORINFO

Cursor-information structure.

```
*** CURINF structure
  10 CURINF-BLOCK.
***   Window handle
    15 CURINF-HWND          PIC S9(9) USAGE BINARY.
***   x coordinate
    15 CURINF-X             PIC S9(9) USAGE BINARY.
***   y coordinate
    15 CURINF-Y             PIC S9(9) USAGE BINARY.
***   Cursor width
    15 CURINF-CX            PIC S9(9) USAGE BINARY.
***   Cursor height
    15 CURINF-CY            PIC S9(9) USAGE BINARY.
***   Options
    15 CURINF-OPTIONS       PIC S9(9) USAGE BINARY.
***   Cursor box
    15 CURINF-RECT.
      20 CURINF-XLEFT       PIC S9(9) USAGE BINARY.
      20 CURINF-YBOTTOM     PIC S9(9) USAGE BINARY.
      20 CURINF-XRIGHT      PIC S9(9) USAGE BINARY.
      20 CURINF-YTOP        PIC S9(9) USAGE BINARY.
```

DEVOPENDATA

Open-device data area. The format of this area is the same as a *DEVOPENSTRUC* structure.
(Maps via DEVOPENSTRUC)

DEVOPENSTRUC Open-device data structure.

The same structure is applicable to both DevOpenDC and SplQmOpen calls.

```
*** DEVSTRUC structure
  10 DEVSTRUC-BLOCK.
***   Logical address. (STRL→HSTRUCT)
   15 DEVSTRUC-ADDRESS          PIC S9(9) USAGE BINARY.
***   Driver name. (STRL→HSTRUCT)
   15 DEVSTRUC-DRIVERNAME       PIC S9(9) USAGE BINARY.
***   Driver data. (DRIVDATA→HSTRUCT)
   15 DEVSTRUC-DRIVERDATA       PIC S9(9) USAGE BINARY.
***   Data type. (STRL→HSTRUCT)
   15 DEVSTRUC-DATATYPE         PIC S9(9) USAGE BINARY.
***   Comment. (STRL→HSTRUCT)
   15 DEVSTRUC-COMMENT          PIC S9(9) USAGE BINARY.
***   Queue-processor name. (STRL→HSTRUCT)
   15 DEVSTRUC-QUEUEPROCNAME    PIC S9(9) USAGE BINARY.
***   Queue-processor parameters. (STRL→HSTRUCT)
   15 DEVSTRUC-QUEUEPROCPARAMS  PIC S9(9) USAGE BINARY.
***   Spooler parameters. (STRL→HSTRUCT)
   15 DEVSTRUC-SPOOLERPARAMS    PIC S9(9) USAGE BINARY.
***   Network parameters. (STRL→HSTRUCT)
   15 DEVSTRUC-NETWORKPARAMS    PIC S9(9) USAGE BINARY.
```

DLGTEMPLATE Dialog-template structure.

```
*** DLGT structure
  10 DLGT-BLOCK.
***   Length of template
    15 DLGT-LENGTH              PIC S9(9) USAGE BINARY.
***   Template format type
    15 DLGT-TYPE                PIC S9(9) USAGE BINARY.
***   Code page
    15 DLGT-CODEPAGE            PIC S9(9) USAGE BINARY.
***   Offset to dialog items
    15 DLGT-ITEMOFFSET          PIC S9(9) USAGE BINARY.
***   Template status
    15 DLGT-TEMPLATESTATUS      PIC S9(9) USAGE BINARY.
***   Index of item to receive focus initially
    15 DLGT-ITEMFOCUS           PIC S9(9) USAGE BINARY.
***   Count of presentation-parameter offsets
    15 DLGT-PRESPARAMSOFFSETS   PIC S9(9) USAGE BINARY.
***   Start of dialog items
    15 DLGT-DLGTI               OCCURS DLGT-DIM TIMES.
***   Status
      20 DLGT-ITEMSTATUS          PIC S9(9) USAGE BINARY.
***   Count of children to this dialog item
      20 DLGT-CHILDREN            PIC S9(9) USAGE BINARY.
***   Length of class name
      20 DLGT-CLASSLEN            PIC S9(9) USAGE BINARY.
***   Offset to class name
      20 DLGT-CLASSNAME           PIC S9(9) USAGE BINARY.
***   Length of text
      20 DLGT-TEXTLEN             PIC S9(9) USAGE BINARY.
***   Offset to text
      20 DLGT-TEXT                PIC S9(9) USAGE BINARY.
***   Dialog item window style
      20 DLGT-STYLE               PIC S9(9) USAGE BINARY.
***   x coordinate of origin of dialog-item window
      20 DLGT-X                   PIC S9(9) USAGE BINARY.
***   y coordinate of origin of dialog-item window
      20 DLGT-Y                   PIC S9(9) USAGE BINARY.
***   Dialog-item window width
      20 DLGT-WIDTH               PIC S9(9) USAGE BINARY.
***   Dialog-item window height
      20 DLGT-HEIGHT              PIC S9(9) USAGE BINARY.
***   Identity
      20 DLGT-ID                  PIC S9(9) USAGE BINARY.
***   Reserved
      20 DLGT-PRESPARAMS          PIC S9(9) USAGE BINARY.
***   Offset to control data
      20 DLGT-CTLDATA             PIC S9(9) USAGE BINARY.
```

DLGTITEM Dialog-item structure.

```
*** DLGTITEM structure
  10 DLGTITEM-BLOCK.
***   Status
   15 DLGTITEM-ITEMSTATUS   PIC S9(9) USAGE BINARY.
***   Count of children to this dialog item
   15 DLGTITEM-CHILDREN     PIC S9(9) USAGE BINARY.
***   Length of class name
   15 DLGTITEM-CLASSLEN     PIC S9(9) USAGE BINARY.
***   Offset to class name
   15 DLGTITEM-CLASSNAME    PIC S9(9) USAGE BINARY.
***   Length of text
   15 DLGTITEM-TEXTLEN      PIC S9(9) USAGE BINARY.
***   Offset to text
   15 DLGTITEM-TEXT         PIC S9(9) USAGE BINARY.
***   Dialog item window style
   15 DLGTITEM-STYLE        PIC S9(9) USAGE BINARY.
***   x coordinate of origin of dialog-item window
   15 DLGTITEM-X            PIC S9(9) USAGE BINARY.
***   y coordinate of origin of dialog-item window
   15 DLGTITEM-Y            PIC S9(9) USAGE BINARY.
***   Dialog-item window width
   15 DLGTITEM-WIDTH        PIC S9(9) USAGE BINARY.
***   Dialog-item window height
   15 DLGTITEM-HEIGHT       PIC S9(9) USAGE BINARY.
***   Identity
   15 DLGTITEM-ID           PIC S9(9) USAGE BINARY.
***   Reserved
   15 DLGTITEM-PRESPARAMS   PIC S9(9) USAGE BINARY.
***   Offset to control data
   15 DLGTITEM-CTLDATA      PIC S9(9) USAGE BINARY.
```

DRIVDATA Driver-data structure.
(HSTRUCT: Use composition or decomposition functions.)

ENTRYFDATA Entry field control data structure.

```
*** ENTFDATA structure
  10 ENTFDATA-BLOCK.
***   Length of control data in bytes
   15 ENTFDATA-LENGTH       PIC S9(9) USAGE BINARY.
***   Edit limit
   15 ENTFDATA-EDITLIMIT    PIC S9(9) USAGE BINARY.
***   Minimum selection
   15 ENTFDATA-MINSEL       PIC S9(9) USAGE BINARY.
***   Maximum selection
   15 ENTFDATA-MAXSEL       PIC S9(9) USAGE BINARY.
***   Picture mask string. (STRL→HSTRUCT)
```

ERRINFO Error-information structure.
(HSTRUCT: Use composition or decomposition functions.)

ERRORID Error identity.
PIC S9(9) USAGE BINARY

FATTRS Font-attributes structure.

```
*** FATTRS structure
  10 FATTRS-BLOCK.
***   Length of record
    15 FATTRS-LENGTH          PIC S9(9) USAGE BINARY.
***   Selection indicators
    15 FATTRS-SELECTION       PIC S9(9) USAGE BINARY.
***   Matched-font identity
    15 FATTRS-MATCH           PIC S9(9) USAGE BINARY.
***   Typeface name
    15 FATTRS-LENGTH-2        PIC S9(9) USAGE BINARY.
    15 FATTRS-FACENAME        PIC X(32).
***   Registry identifier
    15 FATTRS-REGISTRY        PIC S9(9) USAGE BINARY.
***   Code page
    15 FATTRS-CODEPAGE        PIC S9(9) USAGE BINARY.
***   Maximum base-line extension
    15 FATTRS-MAXBASELINEEXT  PIC S9(9) USAGE BINARY.
***   Average character width
    15 FATTRS-AVECHARWIDTH    PIC S9(9) USAGE BINARY.
***   Type indicators
    15 FATTRS-TYPE            PIC S9(9) USAGE BINARY.
***   Font-use indicators
    15 FATTRS-FONTUSE         PIC S9(9) USAGE BINARY.
```

FFDESCS Font-file descriptor.

```
*** FFDESCS structure
  10 FFDESCS-BLOCK.
***   Family name
    15 FFDESCS-LENGTH       PIC S9(9) USAGE BINARY.
    15 FFDESCS-FAMILYNAME   PIC X(32).
***   Face name
    15 FFDESCS-LENGTH-2     PIC S9(9) USAGE BINARY.
    15 FFDESCS-FACENAME     PIC X(32).
```

FIXED Signed-integer fraction (16:16). This is a concatenation of a SHORT with a USHORT.
(Maps via COMPOSED)

FONTMETRICS Font-metrics structure.

```
*** FMETRS structure
  10 FMETRS-BLOCK.
***   Family name
    15 FMETRS-LENGTH            PIC S9(9) USAGE BINARY.
    15 FMETRS-FAMILYNAME        PIC X(32).
***   Facename
    15 FMETRS-LENGTH-2          PIC S9(9) USAGE BINARY.
    15 FMETRS-FACENAME          PIC X(32).
***   Registry identifier
    15 FMETRS-REGISTRY          PIC S9(9) USAGE BINARY.
***   Code page
    15 FMETRS-CODEPAGE          PIC S9(9) USAGE BINARY.
***   Em height
    15 FMETRS-EMHEIGHT          PIC S9(9) USAGE BINARY.
***   x height
    15 FMETRS-XHEIGHT           PIC S9(9) USAGE BINARY.
***   Maximum ascender
    15 FMETRS-MAXASCENDER       PIC S9(9) USAGE BINARY.
```

```
***  Maximum descender
   15 FMETRS-MAXDESCENDER        PIC S9(9) USAGE BINARY.
***  Lowercase ascent
   15 FMETRS-LOWERCASEASCENT     PIC S9(9) USAGE BINARY.
***  Lowercase descent
   15 FMETRS-LOWERCASEDESCENT    PIC S9(9) USAGE BINARY.
***  Internal leading
   15 FMETRS-INTERNALLEADING     PIC S9(9) USAGE BINARY.
***  External leading
   15 FMETRS-EXTERNALLEADING     PIC S9(9) USAGE BINARY.
***  Average character width
   15 FMETRS-AVECHARWIDTH        PIC S9(9) USAGE BINARY.
***  Maximum character increment
   15 FMETRS-MAXCHARINC          PIC S9(9) USAGE BINARY.
***  Em increment
   15 FMETRS-EMINC               PIC S9(9) USAGE BINARY.
***  Maximum baseline extent
   15 FMETRS-MAXBASELINEEXT      PIC S9(9) USAGE BINARY.
***  Character slope
   15 FMETRS-CHARSLOPE           PIC S9(9) USAGE BINARY.
***  Inline direction
   15 FMETRS-INLINEDIR           PIC S9(9) USAGE BINARY.
***  Character rotation
   15 FMETRS-CHARROT             PIC S9(9) USAGE BINARY.
***  Weight class
   15 FMETRS-WEIGHTCLASS         PIC S9(9) USAGE BINARY.
***  Width class
   15 FMETRS-WIDTHCLASS          PIC S9(9) USAGE BINARY.
***  x device resolution
   15 FMETRS-XDEVICERES          PIC S9(9) USAGE BINARY.
***  y device resolution
   15 FMETRS-YDEVICERES          PIC S9(9) USAGE BINARY.
***  First character
   15 FMETRS-FIRSTCHAR           PIC S9(9) USAGE BINARY.
***  Last character
   15 FMETRS-LASTCHAR            PIC S9(9) USAGE BINARY.
***  Default character
   15 FMETRS-DEFAULTCHAR         PIC S9(9) USAGE BINARY.
***  Break character
   15 FMETRS-BREAKCHAR           PIC S9(9) USAGE BINARY.
***  Nominal point size
   15 FMETRS-NOMINALPOINTSIZE    PIC S9(9) USAGE BINARY.
***  Minimum point size
   15 FMETRS-MINIMUMPOINTSIZE    PIC S9(9) USAGE BINARY.
***  Maximum point size
   15 FMETRS-MAXIMUMPOINTSIZE    PIC S9(9) USAGE BINARY.
***  Type indicators
   15 FMETRS-TYPE                PIC S9(9) USAGE BINARY.
***  Definition indicators
   15 FMETRS-DEFN                PIC S9(9) USAGE BINARY.
***  Selection indicators
   15 FMETRS-SELECTION           PIC S9(9) USAGE BINARY.
***  Capabilities
   15 FMETRS-CAPABILITIES        PIC S9(9) USAGE BINARY.
***  Subscript x size
   15 FMETRS-SUBSCRIPTXSIZE      PIC S9(9) USAGE BINARY.
***  Subscript y size
```

```
   15 FMETRS-SUBSCRIPTYSIZE      PIC S9(9) USAGE BINARY.
***   Subscript x offset
   15 FMETRS-SUBSCRIPTXOFFSET    PIC S9(9) USAGE BINARY.
***   Subscript y offset
   15 FMETRS-SUBSCRIPTYOFFSET    PIC S9(9) USAGE BINARY.
***   Superscript x size
   15 FMETRS-SUPERSCRIPTXSIZE    PIC S9(9) USAGE BINARY.
***   Superscript y size
   15 FMETRS-SUPERSCRIPTYSIZE    PIC S9(9) USAGE BINARY.
***   Superscript x offset
   15 FMETRS-SUPERSCRIPTXOFFSET  PIC S9(9) USAGE BINARY.
***   Superscript y offset
   15 FMETRS-SUPERSCRIPTYOFFSET  PIC S9(9) USAGE BINARY.
***   Underscore size
   15 FMETRS-UNDERSCORESIZE      PIC S9(9) USAGE BINARY.
***   Underscore position
   15 FMETRS-UNDERSCOREPOSITION  PIC S9(9) USAGE BINARY.
***   Strikeout size
   15 FMETRS-STRIKEOUTSIZE       PIC S9(9) USAGE BINARY.
***   Strikeout position
   15 FMETRS-STRIKEOUTPOSITION   PIC S9(9) USAGE BINARY.
***   Kerning pairs
   15 FMETRS-KERNINGPAIRS        PIC S9(9) USAGE BINARY.
***   Family class
   15 FMETRS-FAMILYCLASS         PIC S9(9) USAGE BINARY.
***   Matched font identity
   15 FMETRS-MATCH               PIC S9(9) USAGE BINARY.
```

FRAMECDATA Frame-control-data structure.

```
*** FRACDATA structure
 10 FRACDATA-BLOCK.
***   Length
   15 FRACDATA-LENGTH       PIC S9(9) USAGE BINARY.
***   Frame-creation flags
   15 FRACDATA-CREATEFLAGS  PIC S9(9) USAGE BINARY.
***   Identifier of required resource
   15 FRACDATA-RESOURCES    PIC S9(9) USAGE BINARY.
***   Resource identifier
   15 FRACDATA-RESOURCE     PIC S9(9) USAGE BINARY.
```

GRADIENT Direction-vector structure.
(Maps via GRADIENTL)

GRADIENTL Direction-vector structure.
It is represented by the pair of values:

X: PIC S9(9) USAGE BINARY
Y: PIC S9(9) USAGE BINARY

HAB Anchor-block handle.
(Maps via HANDLE)

HACCEL Accelerator-table handle.
(Maps via HANDLE)

HANDLE The handle of a resource.
PIC S9(9) USAGE BINARY

HAPP
Handle of an application started by the WinInstStartApp function.
(Maps via HANDLE)

HATOMTBL
Atom-table handle.
(Maps via HANDLE)

HBITMAP
Bit-map handle.
(Maps via HANDLE)

HCINFO
Hardcopy-capabilities structure.

```
*** HCINFO structure
  10 HCINFO-BLOCK.
***   Form name
   15 HCINFO-LENGTH       PIC S9(9) USAGE BINARY.
   15 HCINFO-FORMNAME     PIC X(32).
***   Width (left-to-right) in millimeters
   15 HCINFO-XWIDTH       PIC S9(9) USAGE BINARY.
***   Height (top-to-bottom) in millimeters
   15 HCINFO-YHEIGHT      PIC S9(9) USAGE BINARY.
***   Left clip limit in millimeters
   15 HCINFO-XLEFTCLIP    PIC S9(9) USAGE BINARY.
***   Bottom clip limit in millimeters
   15 HCINFO-YBOTTOMCLIP  PIC S9(9) USAGE BINARY.
***   Right clip limit in millimeters
   15 HCINFO-XRIGHTCLIP   PIC S9(9) USAGE BINARY.
***   Top clip limit in millimeters
   15 HCINFO-YTOPCLIP     PIC S9(9) USAGE BINARY.
***   Number of pels between left and right clip limits
   15 HCINFO-XPELS        PIC S9(9) USAGE BINARY.
***   Number of pels between bottom and top clip limits
   15 HCINFO-YPELS        PIC S9(9) USAGE BINARY.
***   Attributes of the form identifier
   15 HCINFO-ATTRIBUTES   PIC S9(9) USAGE BINARY.
```

HDC
Device-context handle.
(Maps via HANDLE)

HENUM
Window-enumeration handle.
(Maps via HANDLE)

HINI
Initialization-file handle.
(Maps via HANDLE)

HLIB
Library handle.
(Maps via HANDLE)

HMF
Metafile handle.
(Maps via HANDLE)

HMODULE
Module handle.
PIC S9(9) USAGE BINARY

HMQ
Message-queue handle.
(Maps via HANDLE)

HPOINTER
Handle of a pointer.
(Maps via HANDLE)

HPROC
Processor handle.
(Maps via HANDLE)

HPROGARRAY Array of program handles.

```
*** HPROGA structure
  10 HPROGA-BLOCK.
***   Program handle array
    15 HPROGA-AHPROG   PIC S9(9) USAGE BINARY
                       OCCURS HPROGA-DIM TIMES.
```

HPROGRAM Program handle.
(Maps via HANDLE)

HPS Presentation-space handle.
(Maps via HANDLE)

HRGN Region handle.
(Maps via HANDLE)

HSEM Semaphore handle.
PIC S9(9) USAGE BINARY

HSPL Spooler handle.
(Maps via HANDLE)

HSTRUCT Structure handle.

An *HSTRUCT* must *always* be given a value by the application prior to its use on a call or in a structure. This applies even when the *HSTRUCT* or structure is an output parameter.

The *HSTRUCT* should be set to the NULL value for those calls and structures where it is not required to have been set to the handle of a previously-created data structure.
PIC S9(9) USAGE BINARY

HSWITCH Switch-list-entry handle.
(Maps via HANDLE)

HVPS VIO presentation-space handle.
PIC S9(9) USAGE BINARY

HWND Window handle.
(Maps via HANDLE)

IDENTITY Identity value. Up to 65 536 different identities are available.
PIC S9(9) USAGE BINARY

IDENTITY4 Identity value. Up to 4 294 967 296 different identities are available.
PIC S9(9) USAGE BINARY

IMAGEBUNDLE Image-attributes bundle structure.

```
*** IMAGEBUN structure
  10 IMAGEBUN-BLOCK.
***   Image foreground color
    15 IMAGEBUN-COLOR        PIC S9(9) USAGE BINARY.
***   Image background color
    15 IMAGEBUN-BACKCOLOR    PIC S9(9) USAGE BINARY.
***   Image foreground-mix mode
    15 IMAGEBUN-MIXMODE      PIC S9(9) USAGE BINARY.
***   Image background-mix mode
    15 IMAGEBUN-BACKMIXMODE  PIC S9(9) USAGE BINARY.
```

INDEX2 Index value, in the range 0 through 65 535.
PIC S9(9) USAGE BINARY

IPT Insertion point for multi-line entry field.
(Maps via LONG)

KERNINGPAIRS Kerning-pair records structure.

```
*** KERNPAIR structure
  10 KERNPAIR-BLOCK.
***   First character of pair
    15 KERNPAIR-FIRSTCHAR      PIC S9(9) USAGE BINARY.
***   Second character of pair
    15 KERNPAIR-SECONDCHAR     PIC S9(9) USAGE BINARY.
***   Amount of kerning for this pair
    15 KERNPAIR-KERNINGAMOUNT  PIC S9(9) USAGE BINARY.
```

LENGTH1 Length value, in the range 0 through 255.

```
PIC S9(9) USAGE BINARY
```

LENGTH2 Length value, in the range 0 through 65 535.

```
PIC S9(9) USAGE BINARY
```

LENGTH4 Length value, in the range 0 through 2 147 483 647.

```
PIC S9(9) USAGE BINARY
```

LINEBUNDLE Line-attributes bundle structure.

```
*** LINEBUN structure
  10 LINEBUN-BLOCK.
***   Line foreground color
    15 LINEBUN-COLOR        PIC S9(9) USAGE BINARY.
***   Reserved
    15 LINEBUN-BACKCOLOR    PIC S9(9) USAGE BINARY.
***   Line foreground-mix mode
    15 LINEBUN-MIXMODE      PIC S9(9) USAGE BINARY.
***   Reserved
    15 LINEBUN-BACKMIXMODE  PIC S9(9) USAGE BINARY.
***   Line width
    15 LINEBUN-WIDTH        PIC S9(9) USAGE BINARY.
***   Geometric line width
    15 LINEBUN-GEOMWIDTH    PIC S9(9) USAGE BINARY.
***   Line type
    15 LINEBUN-TYPE         PIC S9(9) USAGE BINARY.
***   Line end
    15 LINEBUN-END          PIC S9(9) USAGE BINARY.
***   Line join
    15 LINEBUN-JOIN         PIC S9(9) USAGE BINARY.
```

LONG Signed integer in the range −2 147 483 648 through 2 147 483 647.

Note: Where this data type represents a graphic coordinate in world or model space, its value is restricted to −134 217 728 through 134 217 727. A graphic coordinate in device or screen coordinates is restricted to −32 768 through 32 767. Its value may be further restricted by any transforms currently in force, including the positioning of the origin of the window on the screen. In particular, coordinates in world or model space must not generate coordinate values after transformation (that is in device or screen space) outside the range −32 768 through 32 767.

```
PIC S9(9) USAGE BINARY
```

MARGSTRUCT Multi-line entry field margin information.

```
*** MARGST structure
  10 MARGST-BLOCK.
   15 MARGST-FLAGS   PIC S9(9) USAGE BINARY.
   15 MARGST-MOUMSG  PIC S9(9) USAGE BINARY.
   15 MARGST-NEAR    PIC S9(9) USAGE BINARY.
```

MARKERBUNDLE Marker-attributes bundle structure.

```
*** MARKBUN structure
  10 MARKBUN-BLOCK.
***   Marker foreground color
   15 MARKBUN-COLOR        PIC S9(9) USAGE BINARY.
***   Marker background color
   15 MARKBUN-BACKCOLOR    PIC S9(9) USAGE BINARY.
***   Marker foreground-mix mode
   15 MARKBUN-MIXMODE      PIC S9(9) USAGE BINARY.
***   Marker background-mix mode
   15 MARKBUN-BACKMIXMODE  PIC S9(9) USAGE BINARY.
***   Marker set
   15 MARKBUN-SET          PIC S9(9) USAGE BINARY.
***   Marker symbol
   15 MARKBUN-SYMBOL       PIC S9(9) USAGE BINARY.
***   Marker cell
   15 MARKBUN-CELL.
     20 MARKBUN-WIDTH      PIC S9(9) USAGE BINARY.
     20 MARKBUN-HEIGHT     PIC S9(9) USAGE BINARY.
```

MATRIX Matrix-elements structure.
(Maps via MATRIXLF)

MATRIXLF Matrix-elements structure.

```
*** MATRIXLF structure
  10 MATRIXLF-BLOCK.
***   First element of first row
   15 MATRIXLF-M11   PIC S9(9) USAGE BINARY.
***   Second element of first row
   15 MATRIXLF-M12   PIC S9(9) USAGE BINARY.
***   Third element of first row
   15 MATRIXLF-M13   PIC S9(9) USAGE BINARY.
***   First element of second row
   15 MATRIXLF-M21   PIC S9(9) USAGE BINARY.
***   Second element of second row
   15 MATRIXLF-M22   PIC S9(9) USAGE BINARY.
***   Third element of second row
   15 MATRIXLF-M23   PIC S9(9) USAGE BINARY.
***   First element of third row
   15 MATRIXLF-M31   PIC S9(9) USAGE BINARY.
***   Second element of third row
   15 MATRIXLF-M32   PIC S9(9) USAGE BINARY.
***   Third element of third row
   15 MATRIXLF-M33   PIC S9(9) USAGE BINARY.
```

MENUITEM Menu item.

```
*** MENUITEM structure
  10 MENUITEM-BLOCK.
***   Position
    15 MENUITEM-POSITION   PIC S9(9) USAGE BINARY.
***   Style
    15 MENUITEM-STYLE      PIC S9(9) USAGE BINARY.
***   Attribute
    15 MENUITEM-ATTRIBUTE  PIC S9(9) USAGE BINARY.
***   Identity
    15 MENUITEM-IDENTITY   PIC S9(9) USAGE BINARY.
***   Submenu
    15 MENUITEM-SUBMENU    PIC S9(9) USAGE BINARY.
***   Item
    15 MENUITEM-ITEM       PIC S9(9) USAGE BINARY.
```

MLECTLDATA Multi-line entry-field control data structure.

```
*** MLECDATA structure
  10 MLECDATA-BLOCK.
***   Length of control data in bytes
    15 MLECDATA-LENGTH     PIC S9(9) USAGE BINARY.
***   Import/export format
    15 MLECDATA-FORMAT     PIC S9(9) USAGE BINARY.
***   Text limit
    15 MLECDATA-TEXTLIMIT  PIC S9(9) USAGE BINARY.
***   Selection anchor point
    15 MLECDATA-ANCHOR     PIC S9(9) USAGE BINARY.
***   Selection cursor point
    15 MLECDATA-CURSOR     PIC S9(9) USAGE BINARY.
***   Formatting rectangle width in pixels
    15 MLECDATA-XFORMAT    PIC S9(9) USAGE BINARY.
***   Formatting rectangle height in pixels
    15 MLECDATA-YFORMAT    PIC S9(9) USAGE BINARY.
***   Format flags
    15 MLECDATA-FLAGS      PIC S9(9) USAGE BINARY.
```

MLE_SEARCHDATA Search structure for multi-line entry field.
(HSTRUCT: Use composition or decomposition functions.)

MPARAM 4-byte message-dependent parameter structure.

Certain elements of information, placed into the parameters of a message, have data types that do not consume the whole of the 4 bytes of this data type. The rules governing these cases are:

BOOL The value is contained in the low word and the high word is zero.

SHORT The value is contained in the low word and its sign is extended into the high word.

USHORT The value is contained in the low word and the high word is zero.

NULL The entire 4 bytes are zero.

This datatype can be a *HSTRUCT* or a *COMPOSED* datatype.

```
PIC S9(9) USAGE BINARY
```

MQINFO Message-queue information structure.

```
*** MQINF structure
  10 MQINF-BLOCK.
***   Length of structure
   15 MQINF-B          PIC S9(9) USAGE BINARY.
***   Process identity
   15 MQINF-PID        PIC S9(9) USAGE BINARY.
***   Thread identity
   15 MQINF-TID        PIC S9(9) USAGE BINARY.
***   Message count
   15 MQINF-MSGS       PIC S9(9) USAGE BINARY.
***   Reserved. (STORAGE→HSTRUCT)
   15 MQINF-RESERVED   PIC S9(9) USAGE BINARY.
```

MRESULT 4-byte message-dependent reply parameter structure.

Certain elements of information, placed into the parameters of a message, have data types that do not consume the whole of the 4 bytes of this data type. The rules governing these cases are:

BOOL The value is contained in the low word and the high word is zero.

SHORT The value is contained in the low word and its sign is extended into the high word.

USHORT The value is contained in the low word and the high word is zero.

NULL The entire 4 bytes are zero.

This datatype can be a *HSTRUCT* or a *COMPOSED* datatype.

```
PIC S9(9) USAGE BINARY
```

OFFSET2B Offset value in bytes, in the range 0 through 65 535.

```
PIC S9(9) USAGE BINARY
```

OVERFLOW Overflow error structure for multi-line entry field.

```
*** OVERFLOW structure
  10 OVERFLOW-BLOCK.
***   One or more EFR_* flags
   15 OVERFLOW-ERRIND      PIC S9(9) USAGE BINARY.
***   Number of bytes over the limit
   15 OVERFLOW-BYTESOVER   PIC S9(9) USAGE BINARY.
***   Number of pixels over the horizontal limit
   15 OVERFLOW-HORZOVER    PIC S9(9) USAGE BINARY.
***   Number of pixels over the vertical limit
   15 OVERFLOW-VERTOVER    PIC S9(9) USAGE BINARY.
```

OWNERITEM Owner item.

```
*** OWNERIT structure
  10 OWNERIT-BLOCK.
***   Window handle
    15 OWNERIT-HWND           PIC S9(9) USAGE BINARY.
***   Presentation-space handle
    15 OWNERIT-HPS            PIC S9(9) USAGE BINARY.
***   State
    15 OWNERIT-STATE          PIC S9(9) USAGE BINARY.
***   Attribute
    15 OWNERIT-ATTRIBUTE      PIC S9(9) USAGE BINARY.
***   Old state
    15 OWNERIT-STATEOLD       PIC S9(9) USAGE BINARY.
***   Old attribute
    15 OWNERIT-ATTRIBUTEOLD   PIC S9(9) USAGE BINARY.
***   Item rectangle
    15 OWNERIT-ITEMRECTANGLE.
      20 OWNERIT-XLEFT        PIC S9(9) USAGE BINARY.
      20 OWNERIT-YBOTTOM      PIC S9(9) USAGE BINARY.
      20 OWNERIT-XRIGHT       PIC S9(9) USAGE BINARY.
      20 OWNERIT-YTOP         PIC S9(9) USAGE BINARY.
***   Item identity
    15 OWNERIT-IDENTITY       PIC S9(9) USAGE BINARY.
***   Item
    15 OWNERIT-ITEM           PIC S9(9) USAGE BINARY.
```

PARAM Presentation parameter attribute definition.
(HSTRUCT: Use composition or decomposition functions.)

PIBSTRUCT Program-information-block structure.
(HSTRUCT: Use composition or decomposition functions.)

PID Process identity.
PIC S9(9) USAGE BINARY

PIX Pel count for multi-line entry field.
(Maps via LONG)

POINT Point structure.
(Maps via POINTL)

POINTL Point structure (long integer).
It is represented by the pair of values:

X: PIC S9(9) USAGE BINARY
Y: PIC S9(9) USAGE BINARY

POINTS Point structure (short integer).
(Maps via COMPOSED)

PRESPARAMS Presentation parameter data.
(HSTRUCT: Use composition or decomposition functions.)

PRESDATA Class-specific control presentation data, conforming to a *PRESPARAM* data type.
(HSTRUCT: Use composition or decomposition functions.)

PRFPROFILE Profile structure.
(HSTRUCT: Use composition or decomposition functions.)

PROC Procedure identifier.
PIC S9(9) USAGE BINARY

PROGCATEGORY Program category.

```
PIC S9(9) USAGE BINARY
```

PROGDETAILS Program details structure.
(HSTRUCT: Use composition or decomposition functions.)

PROGRAMENTRY Program-entry structure.

```
*** PROGENTR structure
  10 PROGENTR-BLOCK.
***   Program handle
    15 PROGENTR-HPROG          PIC S9(9) USAGE BINARY.
***   Program type
    15 PROGENTR-PROGRAMTYPE.
***   Program category
      20 PROGENTR-PROGC          PIC S9(9) USAGE BINARY.
***   Visibility attribute
      20 PROGENTR-VISIBLE        PIC S9(9) USAGE BINARY.
***   Program title (null terminated)
    15 PROGENTR-LENGTH         PIC S9(9) USAGE BINARY.
    15 PROGENTR-PROGRAMTITLE   PIC X(61).
```

PROGTITLE Program-title structure.
(HSTRUCT: Use composition or decomposition functions.)

PROGTYPE Program-type structure.

```
*** PROGTYPE structure
  10 PROGTYPE-BLOCK.
***   Program category
    15 PROGTYPE-PROGC    PIC S9(9) USAGE BINARY.
***   Visibility attribute
    15 PROGTYPE-VISIBLE  PIC S9(9) USAGE BINARY.
```

PROPERTY2 Property value. Up to 65 536 different properties are available.

```
PIC S9(9) USAGE BINARY
```

PROPERTY4 Property value. Up to 2 147 483 647 different properties are available.

```
PIC S9(9) USAGE BINARY
```

POINTERINFO Pointer-information structure.

```
*** PTRINF structure
  10 PTRINF-BLOCK.
***   Bit-map size indicator
    15 PTRINF-FLAG      PIC S9(9) USAGE BINARY.
***   x coordinate of action point
    15 PTRINF-XHOTSPOT  PIC S9(9) USAGE BINARY.
***   y coordinate of action point
    15 PTRINF-YHOTSPOT  PIC S9(9) USAGE BINARY.
***   Bit-map handle of pointer
    15 PTRINF-HBITMAP   PIC S9(9) USAGE BINARY.
***   Bit-map handle of color bit map
    15 PTRINF-COLOR     PIC S9(9) USAGE BINARY.
```

QMOPENDATA Open queue-manager data area. The format of this area is the same as a *DEVOPENSTRUC* structure.
(Maps via DEVOPENSTRUC)

QMSG Message structure.

```
*** QMSG structure
  10 QMSG-BLOCK.
***   Window handle
    15 QMSG-HWND    PIC S9(9) USAGE BINARY.
***   Message identity
    15 QMSG-MSGID   PIC S9(9) USAGE BINARY.
***   Parameter 1
    15 QMSG-PARAM1  PIC S9(9) USAGE BINARY.
***   Parameter 2
    15 QMSG-PARAM2  PIC S9(9) USAGE BINARY.
***   Message time
    15 QMSG-TIME    PIC S9(9) USAGE BINARY.
***   Pointer position when message was generated
    15 QMSG-POINT.
      20 QMSG-X     PIC S9(9) USAGE BINARY.
      20 QMSG-Y     PIC S9(9) USAGE BINARY.
```

RECT Rectangle structure.

Unless otherwise stated, points on the right-hand or top boundaries of the rectangle are not considered to be included in the rectangle; points on the left-hand or bottom boundaries (that are not also on the right-hand or top boundaries) are included in the rectangle.
(Maps via RECTL)

RECTL Rectangle structure.
It is represented by the 4 values:

Xleft:	PIC S9(9) USAGE BINARY
Ybottom:	PIC S9(9) USAGE BINARY
Xright:	PIC S9(9) USAGE BINARY
Ytop:	PIC S9(9) USAGE BINARY

RESID Resource identity.

```
PIC S9(9) USAGE BINARY
```

RGB RGB color value.

```
*** RGB structure
  10 RGB-BLOCK.
***   Blue component of the color definition
    15 RGB-BLUE   PIC X.
***   Green component of the color definition
    15 RGB-GREEN  PIC X.
***   Red component of the color definition
    15 RGB-RED    PIC X.
```

RGNRECT Region-rectangle structure.

```
*** RGNRECT structure
  10 RGNRECT-BLOCK.
***   Rectangle number from which to start enumerating
    15 RGNRECT-START      PIC S9(9) USAGE BINARY.
***   Number of rectangles that can be returned
    15 RGNRECT-COUNT      PIC S9(9) USAGE BINARY.
***   Number of rectangles returned
    15 RGNRECT-RETCOUNT   PIC S9(9) USAGE BINARY.
***   Direction in which the returned rectangles are to be ordered
    15 RGNRECT-DIRECTION  PIC S9(9) USAGE BINARY.
```

ROF

Number representation, equivalent to *FIXED*.
(Maps via FIXED)

ROL

Number representation, equivalent to *LONG*.
(Maps via LONG)

SBCDATA

Scroll-bar control data structure.

```
*** SBCDATA structure
  10 SBCDATA-BLOCK.
***   Length of control data in bytes
    15 SBCDATA-LENGTH   PIC S9(9) USAGE BINARY.
***   Highlighting code
    15 SBCDATA-HILITE   PIC S9(9) USAGE BINARY.
***   First bound of the scroll-bar range
    15 SBCDATA-FIRST    PIC S9(9) USAGE BINARY.
***   Last bound of the scroll-bar range
    15 SBCDATA-LAST     PIC S9(9) USAGE BINARY.
***   Slider position
    15 SBCDATA-SLIDER   PIC S9(9) USAGE BINARY.
***   Number of data items visible
    15 SBCDATA-VISIBLE  PIC S9(9) USAGE BINARY.
***   Number of data items available
    15 SBCDATA-TOTAL    PIC S9(9) USAGE BINARY.
```

SEGOFF

2-byte segment offset in bytes.
`PIC S9(9) USAGE BINARY`

SFACTORS

Scaling factors, see DevEscape.
It is represented by the pair of values:

X: `PIC S9(9) USAGE BINARY`
Y: `PIC S9(9) USAGE BINARY`

SHORT

Signed integer in the range –32 768 through 32 767.
`PIC S9(9) USAGE BINARY`

SIZEF

Size structure.
It is represented by the pair of values:

Width: `PIC S9(9) USAGE BINARY`
Height: `PIC S9(9) USAGE BINARY`

SIZEL

Size structure.
It is represented by the pair of values:

Width: `PIC S9(9) USAGE BINARY`
Height: `PIC S9(9) USAGE BINARY`

SIZEROF

Size structure.
(Maps via SIZEF)

SIZEROL

Size structure.
(Maps via SIZEL)

SMHSTRUCT Send message hook structure.

```
*** SMH structure
  10 SMH-BLOCK.
***   Parameter 2
    15 SMH-PARAM2   PIC S9(9) USAGE BINARY.
***   Parameter 1
    15 SMH-PARAM1   PIC S9(9) USAGE BINARY.
***   Message identity
    15 SMH-MSGID    PIC S9(9) USAGE BINARY.
***   Window handle
    15 SMH-HWND     PIC S9(9) USAGE BINARY.
```

STORAGE Storage that may contain different data types.
(HSTRUCT: Use composition or decomposition functions.)

STR String with an explicit length count.
As a component of a structure:
(HSTRUCT: Use composition or decomposition functions.)

As a function parameter:
`PIC X(length)`, according to a length parameter.

STRCOND String with an explicit length count.
(Maps via STR)

STRL In this language, the datatype maps as follows:

In a data structure:
HSTRUCT (Use composition or decomposition functions.)

As an array function parameter:
An array of HSTRUCTs

As an INPUT or INPUT-OUTPUT function parameter:
A Length/String pair, as shown below

As an OUTPUT or RETURN function parameter:

If there is an 'output length' function parameter 'n':
As STR(n)
Otherwise:
A String/Length pair, as shown below

Length: `PIC S9(9) USAGE BINARY`
String: `PIC X(length)`

STRLLIST A list of null-terminated strings (that is, a series of concatenated strings each of which has a *STRL* data type) terminated by an additional null.
(HSTRUCT: Use composition or decomposition functions.)

STR16 String of characters, with an implicit length, in a 16-byte field.

It is represented by the pair of values:
Length: `PIC S9(9) USAGE BINARY`
String: `PIC X(16)`

STR32 String of characters, with an implicit length, in a 32-byte field.

It is represented by the pair of values:
Length: `PIC S9(9) USAGE BINARY`
String: `PIC X(32)`

STR64 String of characters, with an implicit length, in a 64-byte field.

It is represented by the pair of values:
Length: `PIC S9(9) USAGE BINARY`
String: `PIC X(64)`

STR8

String of 8 characters.

```
PIC X(8)
```

SWBLOCK

Switch list block structure.

```
*** SWBLOCK structure
  10 SWBLOCK-BLOCK.
***   Count of switch list entries
    15 SWBLOCK-COUNT       PIC S9(9) USAGE BINARY.
***   Switch list entries
    15 SWBLOCK-SWENTRY     OCCURS 0 TO SWBLOCK-DIM TIMES
                           DEPENDING ON SWBLOCK-COUNT.
***   Switch list entry handle
      20 SWBLOCK-HSWITCH     PIC S9(9) USAGE BINARY.
***   Switch list control block structure
      20 SWBLOCK-SWCNTRL.
***   Window handle
        25 SWBLOCK-HWND        PIC S9(9) USAGE BINARY.
***   Window-handle icon
        25 SWBLOCK-ICON        PIC S9(9) USAGE BINARY.
***   Program handle
        25 SWBLOCK-HPROG       PIC S9(9) USAGE BINARY.
***   Process identity
        25 SWBLOCK-PROCESS     PIC S9(9) USAGE BINARY.
***   Session identity
        25 SWBLOCK-SESSION     PIC S9(9) USAGE BINARY.
***   Visibility
        25 SWBLOCK-VISIBILITY  PIC S9(9) USAGE BINARY.
***   Jump indicator
        25 SWBLOCK-JUMP        PIC S9(9) USAGE BINARY.
***   Switch-list control block title (null terminated)
        25 SWBLOCK-LENGTH      PIC S9(9) USAGE BINARY.
        25 SWBLOCK-SWTITLE     PIC X(61).
***   Reserved
        25 SWBLOCK-RESERVED    PIC X.
```

SWCNTRL

Switch-list control block structure.

```
*** SWCNTRL structure
  10 SWCNTRL-BLOCK.
***   Window handle
    15 SWCNTRL-HWND        PIC S9(9) USAGE BINARY.
***   Window-handle icon
    15 SWCNTRL-ICON        PIC S9(9) USAGE BINARY.
***   Program handle
    15 SWCNTRL-HPROG       PIC S9(9) USAGE BINARY.
***   Process identity
    15 SWCNTRL-PROCESS     PIC S9(9) USAGE BINARY.
***   Session identity
    15 SWCNTRL-SESSION     PIC S9(9) USAGE BINARY.
***   Visibility
    15 SWCNTRL-VISIBILITY  PIC S9(9) USAGE BINARY.
***   Jump indicator
    15 SWCNTRL-JUMP        PIC S9(9) USAGE BINARY.
***   Switch-list control block title (null terminated)
    15 SWCNTRL-LENGTH      PIC S9(9) USAGE BINARY.
    15 SWCNTRL-SWTITLE     PIC X(61).
***   Reserved
    15 SWCNTRL-RESERVED    PIC X.
```

SWENTRY Switch list entry structure.

```
*** SWENTRY structure
  10 SWENTRY-BLOCK.
***   Switch list entry handle
    15 SWENTRY-HSWITCH     PIC S9(9) USAGE BINARY.
***   Switch list control block structure
    15 SWENTRY-SWCNTRL.
***   Window handle
      20 SWENTRY-HWND        PIC S9(9) USAGE BINARY.
***   Window-handle icon
      20 SWENTRY-ICON        PIC S9(9) USAGE BINARY.
***   Program handle
      20 SWENTRY-HPROG       PIC S9(9) USAGE BINARY.
***   Process identity
      20 SWENTRY-PROCESS     PIC S9(9) USAGE BINARY.
***   Session identity
      20 SWENTRY-SESSION     PIC S9(9) USAGE BINARY.
***   Visibility
      20 SWENTRY-VISIBILITY  PIC S9(9) USAGE BINARY.
***   Jump indicator
      20 SWENTRY-JUMP        PIC S9(9) USAGE BINARY.
***   Switch-list control block title (null terminated)
      20 SWENTRY-LENGTH      PIC S9(9) USAGE BINARY.
      20 SWENTRY-SWTITLE     PIC X(61).
***   Reserved
      20 SWENTRY-RESERVED    PIC X.
```

SWP Set Window Position structure.

```
*** SWP structure
  10 SWP-BLOCK.
***   Options
    15 SWP-OPTIONS   PIC S9(9) USAGE BINARY.
***   Window height
    15 SWP-HEIGHT    PIC S9(9) USAGE BINARY.
***   Window width
    15 SWP-WIDTH     PIC S9(9) USAGE BINARY.
***   y coordinate of origin
    15 SWP-Y         PIC S9(9) USAGE BINARY.
***   x coordinate of origin
    15 SWP-X         PIC S9(9) USAGE BINARY.
***   Window behind which this window is placed
    15 SWP-BEHIND    PIC S9(9) USAGE BINARY.
***   Window handle
    15 SWP-HWND      PIC S9(9) USAGE BINARY.
```

TID Thread identity.

```
PIC S9(9) USAGE BINARY
```

TIME Time interval in milliseconds.

```
PIC S9(9) USAGE BINARY
```

TRACKINFO Tracking-information structure.

```
*** TRACKINF structure
  10 TRACKINF-BLOCK.
***   Border width
    15 TRACKINF-BORDERWIDTH    PIC S9(9) USAGE BINARY.
***   Border height
    15 TRACKINF-BORDERHEIGHT   PIC S9(9) USAGE BINARY.
***   Grid width
    15 TRACKINF-GRIDWIDTH      PIC S9(9) USAGE BINARY.
***   Grid height
    15 TRACKINF-GRIDHEIGHT     PIC S9(9) USAGE BINARY.
***   Character cell width movement for arrow key
    15 TRACKINF-XKEYBOARD      PIC S9(9) USAGE BINARY.
***   Character cell height movement for arrow key
    15 TRACKINF-YKEYBOARD      PIC S9(9) USAGE BINARY.
***   Starting tracking rectangle
    15 TRACKINF-TRACK.
      20 TRACKINF-XLEFT        PIC S9(9) USAGE BINARY.
      20 TRACKINF-YBOTTOM      PIC S9(9) USAGE BINARY.
      20 TRACKINF-XRIGHT       PIC S9(9) USAGE BINARY.
      20 TRACKINF-YTOP         PIC S9(9) USAGE BINARY.
***   Boundary rectangle
    15 TRACKINF-BOUNDARY.
      20 TRACKINF-XLEFT-2      PIC S9(9) USAGE BINARY.
      20 TRACKINF-YBOTTOM-2    PIC S9(9) USAGE BINARY.
      20 TRACKINF-XRIGHT-2     PIC S9(9) USAGE BINARY.
      20 TRACKINF-YTOP-2       PIC S9(9) USAGE BINARY.
***   Minimum tracking size
    15 TRACKINF-MINTRACKSIZE.
      20 TRACKINF-X            PIC S9(9) USAGE BINARY.
      20 TRACKINF-Y            PIC S9(9) USAGE BINARY.
***   Maximum tracking size
    15 TRACKINF-MAXTRACKSIZE.
      20 TRACKINF-X-2          PIC S9(9) USAGE BINARY.
      20 TRACKINF-Y-2          PIC S9(9) USAGE BINARY.
***   Tracking options
    15 TRACKINF-OPTIONS        PIC S9(9) USAGE BINARY.
```

UCHAR Unsigned integer in the range 0 through 255.

```
PIC S9(9) USAGE BINARY
```

ULONG Unsigned integer in the range 0 through 2 147 483 647.

```
PIC S9(9) USAGE BINARY
```

USERBUTTON User-button data structure.

```
*** USERBTN structure
  10 USERBTN-BLOCK.
***   Window handle
    15 USERBTN-HWND      PIC S9(9) USAGE BINARY.
***   Presentation-space handle
    15 USERBTN-HPS       PIC S9(9) USAGE BINARY.
***   New state of user button
    15 USERBTN-STATE     PIC S9(9) USAGE BINARY.
***   Old state of user button
    15 USERBTN-OLDSTATE  PIC S9(9) USAGE BINARY.
```

USHORT

Unsigned integer in the range 0 through 65 535.

```
PIC S9(9) USAGE BINARY
```

WIDTH4

Width in the range −2 147 483 648 through 2 147 483 647.

```
PIC S9(9) USAGE BINARY
```

WNDPARAMS

Window parameters.

```
*** WNDPARMS structure
  10 WNDPARMS-BLOCK.
***   Window parameter selection
   15 WNDPARMS-STATUS            PIC S9(9) USAGE BINARY.
***   Length of window text
   15 WNDPARMS-LENGTH            PIC S9(9) USAGE BINARY.
***   Window text. (STRL→HSTRUCT)
   15 WNDPARMS-TEXT              PIC S9(9) USAGE BINARY.
***   Length of presentation parameters
   15 WNDPARMS-PRESPARAMSLENGTH  PIC S9(9) USAGE BINARY.
***   Presentation parameters. (PRESDATA→HSTRUCT)
   15 WNDPARMS-PRESPARAMS        PIC S9(9) USAGE BINARY.
***   Length of window class specific data
   15 WNDPARMS-CTLDATALENGTH     PIC S9(9) USAGE BINARY.
***   Window class specific data. (CTLDATA→HSTRUCT)
   15 WNDPARMS-CTLDATA           PIC S9(9) USAGE BINARY.
```

WNDPROC

Window-procedure identifier.

```
PIC S9(9) USAGE BINARY
```

WPOINT

Window point structure.
It is represented by the 4 values:

```
X:          PIC S9(9) USAGE BINARY
Dummy1:     PIC S9(9) USAGE BINARY
Y:          PIC S9(9) USAGE BINARY
Dummy2:     PIC S9(9) USAGE BINARY
```

XYWINSIZE

Window position and size structure.

```
*** XYWINSIZ structure
  10 XYWINSIZ-BLOCK.
***   x coordinate of window origin
   15 XYWINSIZ-X       PIC S9(9) USAGE BINARY.
***   y coordinate of window origin
   15 XYWINSIZ-Y       PIC S9(9) USAGE BINARY.
***   Window width
   15 XYWINSIZ-WIDTH   PIC S9(9) USAGE BINARY.
***   Window height
   15 XYWINSIZ-HEIGHT  PIC S9(9) USAGE BINARY.
***   Window options
   15 XYWINSIZ-WINDOW  PIC S9(9) USAGE BINARY.
```

Chapter 3. Device Function Calls

DevCloseDC - WDCLS

```
      CALL "WDCLS" USING    HDC, HMF.

   *        Device-context handle
    77 HDC    PIC S9(9) USAGE BINARY.
   *        Error indicator/metafile handle (for a metafile device context)
    77 HMF    PIC S9(9) USAGE BINARY.
```

DevEscape - WDESC

```
      CALL "WDESC" USING    HDC, CODE-1, INCOUNT, INDATA, OUTCOUNT, OUTDATA, RESULT.

   *           Device-context handle
    77 HDC          PIC S9(9) USAGE BINARY.
   *           Escape code
    77 CODE-1       PIC S9(9) USAGE BINARY.
   *           Input data count
    77 INCOUNT      PIC S9(9) USAGE BINARY.
   *           The input data required for this escape
    77 INDATA       PIC X(incount).
   *           Output data count
    77 OUTCOUNT     PIC S9(9) USAGE BINARY.
   *           Output data
    77 OUTDATA      PIC X(outcount).
   *           Implemented/error indicator
    77 RESULT       PIC S9(9) USAGE BINARY.
```

DevOpenDC - WDOPEN

```
      CALL "WDOPEN" USING    HAB, TYPE-1, LENGTH-1, STRING-1, COUNT-1, DATA-1, COMP-1, HDC.

   *           Anchor-block handle
    77 HAB         PIC S9(9) USAGE BINARY.
   *           Type of device context
    77 TYPE-1      PIC S9(9) USAGE BINARY.
   *           Device-information token
    77 LENGTH-1    PIC S9(9) USAGE BINARY.
    77 STRING-1    PIC X(length-1).
   *           Number of items
    77 COUNT-1     PIC S9(9) USAGE BINARY.
   *           Open-device-context data area
    01 DATA-1.
       COPY DEVSTRUC.
   *           Compatible-device-context handle
    77 COMP-1      PIC S9(9) USAGE BINARY.
   *           Device-context handle
    77 HDC         PIC S9(9) USAGE BINARY.
```

DevPostDeviceModes - WDPDM

```
       CALL "WDPDM" USING    HAB, DRIVERDATA, LENGTH-1, STRING-1, LENGTH-2, DEVICENAME,
                             LENGTH-3, STRING-2, OPTIONS, DRIVERCOUNT.

      *              Anchor-block handle
       77 HAB             PIC S9(9) USAGE BINARY.
      *              Driver data (DRIVDATA-> HSTRUCT)
       77 DRIVERDATA      PIC S9(9) USAGE BINARY.
      *              This is a string containing the name of the presentation device driver
       77 LENGTH-1        PIC S9(9) USAGE BINARY.
       77 STRING-1        PIC X(length-1).
      *              Device-type name
       77 LENGTH-2        PIC S9(9) USAGE BINARY.
       77 DEVICENAME      PIC X(32).
      *              Device name
       77 LENGTH-3        PIC S9(9) USAGE BINARY.
       77 STRING-2        PIC X(length-3).
      *              Dialog options
       77 OPTIONS         PIC S9(9) USAGE BINARY.
      *              Size/error indicator
       77 DRIVERCOUNT     PIC S9(9) USAGE BINARY.
```

DevQueryCaps - WDQCAP

```
       CALL "WDQCAP" USING    HDC, START-1, COUNT-1, ARRAY-ARRAY, SUCCESS.

      *          Device-context handle
       77 HDC       PIC S9(9) USAGE BINARY.
      *          First item of information
       77 START-1   PIC S9(9) USAGE BINARY.
      *          Count of items of information
       77 COUNT-1   PIC S9(9) USAGE BINARY.
      *          Device capabilities
       01 ARRAY-ARRAY.
          02 ARRAY  PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
      *          Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

DevQueryDeviceNames - WDQDN

```
      CALL "WDQDN" USING    HAB, LENGTH-1, STRING-1, DN, LENGTH-2-ARRAY, DEVICENAME-ARRAY,
                            LENGTH-3-ARRAY, DEVICEDESC-ARRAY, DT, LENGTH-4-ARRAY,
                            DATATYPE-ARRAY, SUCCESS.

*             Anchor-block handle
 77 HAB           PIC S9(9) USAGE BINARY.
*             Fully qualified name of the file containing the presentation driver
 77 LENGTH-1      PIC S9(9) USAGE BINARY.
 77 STRING-1      PIC X(length-1).
*             Maximum number of device names and descriptions that can be returned
 77 DN            PIC S9(9) USAGE BINARY.
*             Device-name array
 01 LENGTH-2-ARRAY.
    02 LENGTH-2    PIC S9(9) USAGE BINARY OCCURS dn TIMES.
 01 DEVICENAME-ARRAY.
    02 DEVICENAME  PIC X(32) OCCURS dn TIMES.
*             Device description array
 01 LENGTH-3-ARRAY.
    02 LENGTH-3    PIC S9(9) USAGE BINARY OCCURS dn TIMES.
 01 DEVICEDESC-ARRAY.
    02 DEVICEDESC  PIC X(64) OCCURS dn TIMES.
*             Maximum number of data types that can be returned
 77 DT            PIC S9(9) USAGE BINARY.
*             Data type array
 01 LENGTH-4-ARRAY.
    02 LENGTH-4    PIC S9(9) USAGE BINARY OCCURS dt TIMES.
 01 DATATYPE-ARRAY.
    02 DATATYPE    PIC X(16) OCCURS dt TIMES.
*             Success indicator
 77 SUCCESS       PIC S9(9) USAGE BINARY.
```

DevQueryHardcopyCaps - WDQHC

```
      CALL "WDQHC" USING    HDC, STARTFORM, FORMS, HCINFO, FORMSRETURNED.

*               Device-context handle
 77 HDC               PIC S9(9) USAGE BINARY.
*               Start-forms code
 77 STARTFORM         PIC S9(9) USAGE BINARY.
*               Number of forms to query
 77 FORMS             PIC S9(9) USAGE BINARY.
*               Hardcopy capabilities information
 01 HCINFO.
    COPY HCINFO.
*               Details of forms
 77 FORMSRETURNED     PIC S9(9) USAGE BINARY.
```

Chapter 4. Graphics Presentation Interface Function Calls

GpiAssociate - GSASS

```
       CALL "GSASS" USING   HPS, HDC, SUCCESS.

    *          Presentation-space handle
     77 HPS        PIC S9(9) USAGE BINARY.
    *          Device-context handle
     77 HDC        PIC S9(9) USAGE BINARY.
    *          Success indicator
     77 SUCCESS    PIC S9(9) USAGE BINARY.
```

GpiBeginArea - GSAREA

```
       CALL "GSAREA" USING    HPS, OPTIONS.

    *          Presentation-space handle
     77 HPS        PIC S9(9) USAGE BINARY.
    *          Area options
     77 OPTIONS    PIC S9(9) USAGE BINARY.
```

GpiBeginElement - GSELEM

```
       CALL "GSELEM" USING    HPS, TYPE-1, LENGTH-1, STRING-1.

    *           Presentation-space handle
     77 HPS         PIC S9(9) USAGE BINARY.
    *           Type to be associated with element
     77 TYPE-1      PIC S9(9) USAGE BINARY.
    *           Description
     77 LENGTH-1    PIC S9(9) USAGE BINARY.
     77 STRING-1    PIC X(length-1).
```

GpiBeginPath - GSPATH

```
       CALL "GSPATH" USING    HPS, PATH.

    *       Presentation-space handle
     77 HPS    PIC S9(9) USAGE BINARY.
    *       Path identifier
     77 PATH   PIC S9(9) USAGE BINARY.
```

GpiBitBlt - GIBB

```
       CALL "GIBB" USING  TARGET, SOURCE-1, COUNT-1, X-ARRAY, Y-ARRAY, ROP, OPTIONS.

    *           Target presentation-space handle
     77 TARGET      PIC S9(9) USAGE BINARY.
    *           Source presentation-space handle
     77 SOURCE-1    PIC S9(9) USAGE BINARY.
    *           Point count
     77 COUNT-1     PIC S9(9) USAGE BINARY.
    *           Point array
     01 X-ARRAY.
        02 X        PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
     01 Y-ARRAY.
        02 Y        PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
    *           Mixing function required
     77 ROP         PIC S9(9) USAGE BINARY.
    *           Options
     77 OPTIONS     PIC S9(9) USAGE BINARY.
```

GpiBox - GIBOX

```
       CALL "GIBOX" USING   HPS, CONTROL-1, X, Y, HROUND, VROUND.

      *            Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *            Outline and fill control
       77 CONTROL-1    PIC S9(9) USAGE BINARY.
      *            Corner point
       77 X            PIC S9(9) USAGE BINARY.
       77 Y            PIC S9(9) USAGE BINARY.
      *            Corner-rounding control
       77 HROUND       PIC S9(9) USAGE BINARY.
      *            Corner-rounding control
       77 VROUND       PIC S9(9) USAGE BINARY.
```

GpiCallSegmentMatrix - GICALM

```
       CALL "GICALM" USING   HPS, SEGMENT-1, COUNT-1, ARRAY, OPTIONS.

      *            Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *            Identifier of segment to be called
       77 SEGMENT-1    PIC S9(9) USAGE BINARY.
      *            Number of elements
       77 COUNT-1      PIC S9(9) USAGE BINARY.
      *            Instance transform matrix
       01 ARRAY.
          COPY MATRIXLF.
      *            Transformation options
       77 OPTIONS      PIC S9(9) USAGE BINARY.
```

GpiCharString - GSCHAP

```
       CALL "GSCHAP" USING    HPS, COUNT-1, STRING-1.

      *           Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *           Number of characters
       77 COUNT-1     PIC S9(9) USAGE BINARY.
      *           Characters to be drawn
       77 STRING-1    PIC X(count-1).
```

GpiCharStringAt - GICHAR

```
       CALL "GICHAR" USING   HPS, X, Y, COUNT-1, STRING-1.

      *           Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *           Starting position
       77 X           PIC S9(9) USAGE BINARY.
       77 Y           PIC S9(9) USAGE BINARY.
      *           Number of characters
       77 COUNT-1     PIC S9(9) USAGE BINARY.
      *           Characters to be drawn
       77 STRING-1    PIC X(count-1).
```

GpiCharStringPos - GICHPP

```
      CALL "GICHPP" USING   HPS, XLEFT, YBOTTOM, XRIGHT, YTOP, OPTIONS, COUNT-1, STRING-1,
                            ADX-ARRAY.

      *           Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *           Rectangle structure
       77 XLEFT     PIC S9(9) USAGE BINARY.
       77 YBOTTOM   PIC S9(9) USAGE BINARY.
       77 XRIGHT    PIC S9(9) USAGE BINARY.
       77 YTOP      PIC S9(9) USAGE BINARY.
      *           Formatting options
       77 OPTIONS   PIC S9(9) USAGE BINARY.
      *           Number of characters in the string
       77 COUNT-1   PIC S9(9) USAGE BINARY.
      *           Character string
       77 STRING-1  PIC X(count-1).
      *           Increment values
       01 ADX-ARRAY.
          02 ADX    PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
```

GpiCharStringPosAt - GICHPR

```
      CALL "GICHPR" USING   HPS, X, Y, XLEFT, YBOTTOM, XRIGHT, YTOP, OPTIONS, COUNT-1,
                            STRING-1, ADX-ARRAY.

      *           Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *           Starting position
       77 X         PIC S9(9) USAGE BINARY.
       77 Y         PIC S9(9) USAGE BINARY.
      *           Rectangle structure
       77 XLEFT     PIC S9(9) USAGE BINARY.
       77 YBOTTOM   PIC S9(9) USAGE BINARY.
       77 XRIGHT    PIC S9(9) USAGE BINARY.
       77 YTOP      PIC S9(9) USAGE BINARY.
      *           Formatting options
       77 OPTIONS   PIC S9(9) USAGE BINARY.
      *           Number of characters in the string
       77 COUNT-1   PIC S9(9) USAGE BINARY.
      *           Character string
       77 STRING-1  PIC X(count-1).
      *           Increment values
       01 ADX-ARRAY.
          02 ADX    PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
```

GpiCloseFigure - GSFCLS

```
      CALL "GSFCLS" USING   HPS.

      *       Presentation-space handle
       77 HPS   PIC S9(9) USAGE BINARY.
```

GpiCloseSegment - GSSCLS

```
      CALL "GSSCLS" USING   HPS.

      *       Presentation-space handle
       77 HPS   PIC S9(9) USAGE BINARY.
```

GpiCombineRegion - GSCREG

```
       CALL "GSCREG" USING    HPS, DEST, SRC1, SRC2, MODE-1, COMPLEXITY.

      *             Presentation-space handle
       77 HPS           PIC S9(9) USAGE BINARY.
      *             Destination-region handle
       77 DEST          PIC S9(9) USAGE BINARY.
      *             First-source-region handle
       77 SRC1          PIC S9(9) USAGE BINARY.
      *             Second-source-region handle
       77 SRC2          PIC S9(9) USAGE BINARY.
      *             Method of combination
       77 MODE-1        PIC S9(9) USAGE BINARY.
      *             Complexity of resulting region/error indicator
       77 COMPLEXITY    PIC S9(9) USAGE BINARY.
```

GpiComment - GSCOMM

```
       CALL "GSCOMM" USING     HPS, LENGTH-1, DATA-1.

      *           Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *           Data length
       77 LENGTH-1    PIC S9(9) USAGE BINARY.
      *           Comment data
       77 DATA-1      PIC X(length-1).
```

GpiConvert - GICONV

```
       CALL "GICONV" USING   HPS, SRC, TARG, COUNT-1, X-ARRAY, Y-ARRAY.

      *          Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *          Source-coordinate space
       77 SRC        PIC S9(9) USAGE BINARY.
      *          Target-coordinate space
       77 TARG       PIC S9(9) USAGE BINARY.
      *          Point count
       77 COUNT-1    PIC S9(9) USAGE BINARY.
      *          Array of (x,y) coordinate pair structures
       01 X-ARRAY.
          02 X       PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
       01 Y-ARRAY.
          02 Y       PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
```

GpiCopyMetaFile - GSMCPY

```
       CALL "GSMCPY" USING    HMF, NEW.

      *       Source metafile handle
       77 HMF    PIC S9(9) USAGE BINARY.
      *       New metafile handle/error indicator
       77 NEW    PIC S9(9) USAGE BINARY.
```

GpiCorrelateChain - GICORS

```
      CALL "GICORS" USING   HPS, TYPE-1, X, Y, MAXHITS, MAXDEPTH, SEGTAG-ARRAY, NUMHITS.

      *           Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *           Segment type
       77 TYPE-1       PIC S9(9) USAGE BINARY.
      *           Pick position
       77 X            PIC S9(9) USAGE BINARY.
       77 Y            PIC S9(9) USAGE BINARY.
      *           Maximum hits
       77 MAXHITS      PIC S9(9) USAGE BINARY.
      *           Number of pairs
       77 MAXDEPTH     PIC S9(9) USAGE BINARY.
      *           Segment identifiers and tags
       01 SEGTAG-ARRAY.
          02 SEGTAG    PIC S9(9) USAGE BINARY OCCURS 2*maxdepth*maxhits TIMES.
      *           Number of hits or error
       77 NUMHITS      PIC S9(9) USAGE BINARY.
```

GpiCorrelateFrom - GICORF

```
      CALL "GICORF" USING   HPS, FIRSTSEGMENT, LASTSEGMENT, TYPE-1, X, Y, MAXHITS, MAXDEPTH,
                            SEGTAG-ARRAY, NUMHITS.

      *              Presentation-space handle
       77 HPS             PIC S9(9) USAGE BINARY.
      *              Specifies the first segment to be correlated
       77 FIRSTSEGMENT     PIC S9(9) USAGE BINARY.
      *              Specifies the last segment to be correlated
       77 LASTSEGMENT      PIC S9(9) USAGE BINARY.
      *              The type of segments on which correlation is to be performed
       77 TYPE-1           PIC S9(9) USAGE BINARY.
      *              Pick position
       77 X                PIC S9(9) USAGE BINARY.
       77 Y                PIC S9(9) USAGE BINARY.
      *              Maximum hits
       77 MAXHITS          PIC S9(9) USAGE BINARY.
      *              Number of pairs
       77 MAXDEPTH         PIC S9(9) USAGE BINARY.
      *              An array of segment and tag identifiers in alternate elements
       01 SEGTAG-ARRAY.
          02 SEGTAG        PIC S9(9) USAGE BINARY OCCURS 2*maxdepth*maxhits TIMES.
      *              Number of hits, or error
       77 NUMHITS          PIC S9(9) USAGE BINARY.
```

GpiCorrelateSegment - GICSEG

```
       CALL "GICSEG" USING   HPS, SEGMENT-1, TYPE-1, X, Y, MAXHITS, MAXDEPTH, SEGTAG-ARRAY,
                             NUMHITS.

      *            Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *            Identifier of the segment to be correlated; it must be greater than 0
       77 SEGMENT-1    PIC S9(9) USAGE BINARY.
      *            Type of segments on which correlation is to be performed
       77 TYPE-1       PIC S9(9) USAGE BINARY.
      *            Position of the center of the pick aperture in presentation page space
       77 X            PIC S9(9) USAGE BINARY.
       77 Y            PIC S9(9) USAGE BINARY.
      *            Maximum hits
       77 MAXHITS      PIC S9(9) USAGE BINARY.
      *            Number of segment and tag pairs to be returned for each hit
       77 MAXDEPTH     PIC S9(9) USAGE BINARY.
      *            Array
       01 SEGTAG-ARRAY.
          02 SEGTAG    PIC S9(9) USAGE BINARY OCCURS maxdepth*maxhits TIMES.
      *            Number of hits, or error
       77 NUMHITS      PIC S9(9) USAGE BINARY.
```

GpiCreateBitmap - GSCBM

```
       CALL "GSCBM" USING    HPS, NEW, OPTIONS, INITDATA, INFOTABLE, HBM.

      *            Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *            Bit-map information header
       01 NEW.
          COPY BITINFH.
      *            Options
       77 OPTIONS      PIC S9(9) USAGE BINARY.
      *            Buffer address
       77 INITDATA     PIC X(n).
      *            Bit-map information table
       01 INFOTABLE.
          COPY BITINF REPLACING BITINF-DIM BY n.
      *            Bit-map handle/error indicator
       77 HBM          PIC S9(9) USAGE BINARY.
```

GpiCreateLogColorTable - GSCLCT

```
       CALL "GSCLCT" USING    HPS, OPTIONS, FORMAT, START-1, COUNT-1, TABLE-1-ARRAY.

      *          Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *          Options
       77 OPTIONS    PIC S9(9) USAGE BINARY.
      *          Format of entries in the table
       77 FORMAT     PIC S9(9) USAGE BINARY.
      *          Starting index
       77 START-1    PIC S9(9) USAGE BINARY.
      *         Count of elements in TABLE
       77 COUNT-1    PIC S9(9) USAGE BINARY.
      *          Start of the application data area
       01 TABLE-1-ARRAY.
          02 TABLE-1 PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
```

GpiCreateLogFont - GSCRLF

```
      CALL "GSCRLF" USING   HPS, NAME, LCID, ATTRS, MATCH.

  *        Presentation-space handle
   77 HPS     PIC S9(9) USAGE BINARY.
  *        Logical font name
   77 NAME    PIC X(8).
  *        Local identifier
   77 LCID    PIC S9(9) USAGE BINARY.
  *        Attributes of font
   01 ATTRS.
      COPY FATTRS.
  *        Match indicator
   77 MATCH   PIC S9(9) USAGE BINARY.
```

GpiCreatePS - GIPCRT

```
      CALL "GIPCRT" USING   HAB, HDC, WIDTH, HEIGHT, OPTIONS, HPS.

  *          Anchor-block handle
   77 HAB       PIC S9(9) USAGE BINARY.
  *          Device-context handle
   77 HDC       PIC S9(9) USAGE BINARY.
  *          Presentation-page size
   77 WIDTH     PIC S9(9) USAGE BINARY.
   77 HEIGHT    PIC S9(9) USAGE BINARY.
  *          Options
   77 OPTIONS   PIC S9(9) USAGE BINARY.
  *          Presentation-space handle
   77 HPS       PIC S9(9) USAGE BINARY.
```

GpiCreateRegion - GIREG

```
      CALL "GIREG" USING   HPS, COUNT-1, XLEFT-ARRAY, YBOTTOM-ARRAY, XRIGHT-ARRAY, YTOP-ARRAY,
                           HRGN.

  *          Presentation-space handle
   77 HPS       PIC S9(9) USAGE BINARY.
  *          The number of rectangles
   77 COUNT-1   PIC S9(9) USAGE BINARY.
  *          An array of rectangles
   01 XLEFT-ARRAY.
      02 XLEFT   PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
   01 YBOTTOM-ARRAY.
      02 YBOTTOM PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
   01 XRIGHT-ARRAY.
      02 XRIGHT  PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
   01 YTOP-ARRAY.
      02 YTOP    PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
  *          Region handle
   77 HRGN      PIC S9(9) USAGE BINARY.
```

GpiDeleteBitmap - GSDBM

```
      CALL "GSDBM" USING    HBM.

  *       Handle of bit map to be deleted
   77 HBM    PIC S9(9) USAGE BINARY.
```

GpiDeleteElement - GSDLE

```
      CALL "GSDLE" USING   HPS.

  *       Presentation-space handle
   77 HPS    PIC S9(9) USAGE BINARY.
```

GpiDeleteElementRange - GSDLER

```
CALL "GSDLER" USING    HPS, FIRSTELEMENT, LASTELEMENT.

*                Presentation-space handle
 77 HPS             PIC S9(9) USAGE BINARY.
*                Number of the first element to be deleted
 77 FIRSTELEMENT    PIC S9(9) USAGE BINARY.
*                Number of the last element to be deleted
 77 LASTELEMENT     PIC S9(9) USAGE BINARY.
```

GpiDeleteElementsBetweenLabels - GSDELB

```
CALL "GSDELB" USING    HPS, FIRSTLABEL, LASTLABEL.

*             Presentation-space handle
 77 HPS           PIC S9(9) USAGE BINARY.
*             Label marking the start of the elements to be deleted
 77 FIRSTLABEL    PIC S9(9) USAGE BINARY.
*             Label marking the end of the elements to be deleted
 77 LASTLABEL     PIC S9(9) USAGE BINARY.
```

GpiDeleteMetaFile - GSMDEL

```
CALL "GSMDEL" USING    HMF.

*       Metafile handle
 77 HMF    PIC S9(9) USAGE BINARY.
```

GpiDeleteSegment - GSSDEL

```
CALL "GSSDEL" USING    HPS, SEGID.

*        Presentation-space handle
 77 HPS     PIC S9(9) USAGE BINARY.
*        Segment identifier
 77 SEGID   PIC S9(9) USAGE BINARY.
```

GpiDeleteSegments - GSDELS

```
CALL "GSDELS" USING    HPS, FIRSTSEGMENT, LASTSEGMENT.

*                Presentation-space handle
 77 HPS             PIC S9(9) USAGE BINARY.
*                First identifier in the range; it must be greater than 0
 77 FIRSTSEGMENT    PIC S9(9) USAGE BINARY.
*                Last identifier in the range; it must be greater than 0
 77 LASTSEGMENT     PIC S9(9) USAGE BINARY.
```

GpiDeleteSetId - GSRSS

```
CALL "GSRSS" USING    HPS, LCID.

*       Presentation-space handle
 77 HPS    PIC S9(9) USAGE BINARY.
*       Local identifier
 77 LCID   PIC S9(9) USAGE BINARY.
```

GpiDestroyPS - GIPDEL

```
CALL "GIPDEL" USING   HPS.

*       Presentation-space handle
 77 HPS    PIC S9(9) USAGE BINARY.
```

GpiDestroyRegion - GSDREG

```
       CALL "GSDREG" USING    HPS, HRGN.

      *        Presentation-space handle
       77 HPS    PIC S9(9) USAGE BINARY.
      *        Handle of region to be destroyed
       77 HRGN   PIC S9(9) USAGE BINARY.
```

GpiDrawChain - GSDCHN

```
       CALL "GSDCHN" USING    HPS.

      *        Presentation-space handle
       77 HPS    PIC S9(9) USAGE BINARY.
```

GpiDrawDynamics - GSDDYN

```
       CALL "GSDDYN" USING    HPS.

      *        Presentation-space handle
       77 HPS    PIC S9(9) USAGE BINARY.
```

GpiDrawFrom - GSDF

```
       CALL "GSDF" USING   HPS, FIRSTSEGMENT, LASTSEGMENT.

      *                 Presentation-space handle
       77 HPS              PIC S9(9) USAGE BINARY.
      *                 First segment to be drawn; it must be greater than zero
       77 FIRSTSEGMENT     PIC S9(9) USAGE BINARY.
      *                 Last segment to be drawn; it must be greater than zero
       77 LASTSEGMENT      PIC S9(9) USAGE BINARY.
```

GpiDrawSegment - GSDSEG

```
       CALL "GSDSEG" USING    HPS, SEGMENT-1.

      *            Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *            Segment to be drawn; it must be greater than zero
       77 SEGMENT-1    PIC S9(9) USAGE BINARY.
```

GpiEndArea - GSENDA

```
       CALL "GSENDA" USING    HPS.

      *        Presentation-space handle
       77 HPS    PIC S9(9) USAGE BINARY.
```

GpiEndElement - GSENDE

```
       CALL "GSENDE" USING    HPS.

      *        Presentation-space handle
       77 HPS    PIC S9(9) USAGE BINARY.
```

GpiEndPath - GSENDP

```
       CALL "GSENDP" USING    HPS.

      *        Presentation-space handle
       77 HPS    PIC S9(9) USAGE BINARY.
```

GpiEqualRegion - GSEREG

```
       CALL "GSEREG" USING    HPS, SRC1, SRC2.

      *        Presentation-space handle
       77 HPS    PIC S9(9) USAGE BINARY.
      *        Handle of first region
       77 SRC1   PIC S9(9) USAGE BINARY.
      *        Handle of second region
       77 SRC2   PIC S9(9) USAGE BINARY.
```

GpiErase - GSERSE

```
       CALL "GSERSE" USING    HPS.

      *        Presentation-space handle
       77 HPS    PIC S9(9) USAGE BINARY.
```

GpiErrorSegmentData - GSESD

```
       CALL "GSESD" USING    HPS, SEGMENT-1, CONTEXT, OFF-1.

      *            Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *            Segment in which the error occurred
       77 SEGMENT-1    PIC S9(9) USAGE BINARY.
      *            Context of the error
       77 CONTEXT      PIC S9(9) USAGE BINARY.
      *            Position
       77 OFF-1        PIC S9(9) USAGE BINARY.
```

GpiExcludeClipRectangle - GIECR

```
       CALL "GIECR" USING   HPS, XLEFT, YBOTTOM, XRIGHT, YTOP.

      *          Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *          Rectangle to be excluded
       77 XLEFT       PIC S9(9) USAGE BINARY.
       77 YBOTTOM     PIC S9(9) USAGE BINARY.
       77 XRIGHT      PIC S9(9) USAGE BINARY.
       77 YTOP        PIC S9(9) USAGE BINARY.
```

GpiFillPath - GSFILP

```
       CALL "GSFILP" USING   HPS, PATH, OPTIONS.

      *          Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *          Identifier of path whose interior is to be drawn; it must be 1
       77 PATH       PIC S9(9) USAGE BINARY.
      *          Fill option
       77 OPTIONS    PIC S9(9) USAGE BINARY.
```

GpiFullArc - GIFARC

```
       CALL "GIFARC" USING   HPS, CONTROL-1, MULTIPLIER.

      *            Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *            Interior/outline control
       77 CONTROL-1    PIC S9(9) USAGE BINARY.
      *            Multiplier
       77 MULTIPLIER   PIC S9(9) USAGE BINARY.
```

GpiGetData - GSGET

```
CALL "GSGET" USING   HPS, SEGID, OFFSET, FORMAT, LENGTH-1, DATA-1.

*           Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*           Segment identifier
 77 SEGID     PIC S9(9) USAGE BINARY.
*           Segment offset
 77 OFFSET    PIC S9(9) USAGE BINARY.
*           Coordinate type required
 77 FORMAT    PIC S9(9) USAGE BINARY.
*           Length of data buffer
 77 LENGTH-1  PIC S9(9) USAGE BINARY.
*           Data buffer
 77 DATA-1    PIC X(length-1).
```

GpiImage - GSIMG

```
CALL "GSIMG" USING   HPS, FORMAT, WIDTH, HEIGHT, LENGTH-1, DATA-1.

*           Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*           Format of image data
 77 FORMAT    PIC S9(9) USAGE BINARY.
*           Size of image area (in pels)
 77 WIDTH     PIC S9(9) USAGE BINARY.
 77 HEIGHT    PIC S9(9) USAGE BINARY.
*           Length in bytes of image data
 77 LENGTH-1  PIC S9(9) USAGE BINARY.
*           Image data
 77 DATA-1    PIC X(length-1).
```

GpiIntersectClipRectangle - GIICR

```
CALL "GIICR" USING  HPS, XLEFT, YBOTTOM, XRIGHT, YTOP, COMPLEXITY.

*             Presentation-space handle
 77 HPS          PIC S9(9) USAGE BINARY.
*             Rectangle, the coordinates of which are world coordinates
 77 XLEFT        PIC S9(9) USAGE BINARY.
 77 YBOTTOM      PIC S9(9) USAGE BINARY.
 77 XRIGHT       PIC S9(9) USAGE BINARY.
 77 YTOP         PIC S9(9) USAGE BINARY.
*             Complexity of clipping/error indicator
 77 COMPLEXITY   PIC S9(9) USAGE BINARY.
```

GpiLabel - GSINLB

```
CALL "GSINLB" USING   HPS, LABEL-1.

*           Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*           Required label
 77 LABEL-1   PIC S9(9) USAGE BINARY.
```

GpiLine - GILINE

```
CALL "GILINE" USING  HPS, X, Y.

*         Presentation-space handle
 77 HPS    PIC S9(9) USAGE BINARY.
*         End point of the line
 77 X      PIC S9(9) USAGE BINARY.
 77 Y      PIC S9(9) USAGE BINARY.
```

GpiLoadBitmap - GSLBM

```
CALL "GSLBM" USING    HPS, RESOURCE, BITMAP, WIDTH, HEIGHT, HBM.

*           Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*           Resource identity containing the bit map
 77 RESOURCE    PIC S9(9) USAGE BINARY.
*           ID of the bit map within the resource file
 77 BITMAP      PIC S9(9) USAGE BINARY.
*           Width of the bit map in pels
 77 WIDTH       PIC S9(9) USAGE BINARY.
*           Height of the bit map in pels
 77 HEIGHT      PIC S9(9) USAGE BINARY.
*           Bit-map handle
 77 HBM         PIC S9(9) USAGE BINARY.
```

GpiLoadFonts - GSFLO

```
CALL "GSFLO" USING    HAB, LENGTH-1, STRING-1, SUCCESS.

*           Anchor-block handle
 77 HAB         PIC S9(9) USAGE BINARY.
*           Filename
 77 LENGTH-1    PIC S9(9) USAGE BINARY.
 77 STRING-1    PIC X(length-1).
*           Success indicator
 77 SUCCESS     PIC S9(9) USAGE BINARY.
```

GpiLoadMetaFile - GSMLOD

```
CALL "GSMLOD" USING    HAB, LENGTH-1, STRING-1, HMF.

*           Anchor-block handle
 77 HAB         PIC S9(9) USAGE BINARY.
*           Filename
 77 LENGTH-1    PIC S9(9) USAGE BINARY.
 77 STRING-1    PIC X(length-1).
*           Metafile handle or error
 77 HMF         PIC S9(9) USAGE BINARY.
```

GpiMarker - GIMARK

```
CALL "GIMARK" USING    HPS, X, Y.

*       Presentation-space handle
 77 HPS    PIC S9(9) USAGE BINARY.
*       Position of the marker
 77 X      PIC S9(9) USAGE BINARY.
 77 Y      PIC S9(9) USAGE BINARY.
```

GpiModifyPath - GSMODP

```
CALL "GSMODP" USING    HPS, PATH, MODE-1.

*         Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*         Path identifier
 77 PATH      PIC S9(9) USAGE BINARY.
*         Modification required
 77 MODE-1    PIC S9(9) USAGE BINARY.
```

GpiMove - GIMOVE

```
CALL "GIMOVE" USING    HPS, X, Y.

*       Presentation-space handle
 77 HPS    PIC S9(9) USAGE BINARY.
*       Position to which to move
 77 X      PIC S9(9) USAGE BINARY.
 77 Y      PIC S9(9) USAGE BINARY.
```

GpiOffsetClipRegion - GIOCR

```
CALL "GIOCR" USING   HPS, X, Y, COMPLEXITY.

*             Presentation-space handle
 77 HPS          PIC S9(9) USAGE BINARY.
*             Displacement
 77 X            PIC S9(9) USAGE BINARY.
 77 Y            PIC S9(9) USAGE BINARY.
*             Complexity of clipping/error indicator
 77 COMPLEXITY    PIC S9(9) USAGE BINARY.
```

GpiOffsetElementPointer - GSOEP

```
CALL "GSOEP" USING   HPS, OFFSET.

*         Presentation-space handle
 77 HPS      PIC S9(9) USAGE BINARY.
*         Offset to be added to the element pointer
 77 OFFSET   PIC S9(9) USAGE BINARY.
```

GpiOffsetRegion - GIOREG

```
CALL "GIOREG" USING   HPS, HRGN, X, Y.

*       Presentation-space handle
 77 HPS   PIC S9(9) USAGE BINARY.
*       Region handle to be moved
 77 HRGN  PIC S9(9) USAGE BINARY.
*       Offset to be added to the region boundary
 77 X     PIC S9(9) USAGE BINARY.
 77 Y     PIC S9(9) USAGE BINARY.
```

GpiOpenSegment - GSSEG

```
CALL "GSSEG" USING   HPS, SEGMENT-1.

*            Presentation-space handle
 77 HPS          PIC S9(9) USAGE BINARY.
*            Segment identifier
 77 SEGMENT-1    PIC S9(9) USAGE BINARY.
```

GpiOutlinePath - GSOUTP

```
CALL "GSOUTP" USING   HPS, PATH, OPTIONS.

*          Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*          Identifier of path to be outlined; it must be 1
 77 PATH      PIC S9(9) USAGE BINARY.
*          Options
 77 OPTIONS   PIC S9(9) USAGE BINARY.
```

GpiPaintRegion - GSPREG

```
CALL "GSPREG" USING   HPS, HRGN.

*       Presentation-space handle
 77 HPS   PIC S9(9) USAGE BINARY.
*       Region handle
 77 HRGN  PIC S9(9) USAGE BINARY.
```

GpiPartialArc - GIPARC

```
       CALL "GIPARC" USING   HPS, X, Y, MULTIPLIER, STARTANGLE, SWEEPANGLE.

      *             Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *             Center point
       77 X            PIC S9(9) USAGE BINARY.
       77 Y            PIC S9(9) USAGE BINARY.
      *             Multiplier
       77 MULTIPLIER   PIC S9(9) USAGE BINARY.
      *             Start angle in degrees
       77 STARTANGLE   PIC S9(9) USAGE BINARY.
      *             Sweep angle in degrees
       77 SWEEPANGLE   PIC S9(9) USAGE BINARY.
```

GpiPlayMetaFile - GSLOAD

```
       CALL "GSLOAD" USING    HPS, HMF, COUNT1, OPTARRAY-ARRAY, SEGCOUNT, COUNT2, LENGTH-1,
                              STRING-1.

      *           Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *           Metafile handle
       77 HMF         PIC S9(9) USAGE BINARY.
      *           Count of elements in Optarray
       77 COUNT1      PIC S9(9) USAGE BINARY.
      *           Array of options for playing
       01 OPTARRAY-ARRAY.
          02 OPTARRAY  PIC S9(9) USAGE BINARY OCCURS count1 TIMES.
      *           Reserved
       77 SEGCOUNT    PIC S9(9) USAGE BINARY.
      *           Count of bytes in Desc
       77 COUNT2      PIC S9(9) USAGE BINARY.
      *           Descriptive record ( LENGTH-1 is result string length)
       77 LENGTH-1    PIC S9(9) USAGE BINARY.
       77 STRING-1    PIC X(count2).
```

GpiPointArc - GIGARC

```
       CALL "GIGARC" USING   HPS, X-ARRAY, Y-ARRAY.

      *       Presentation-space handle
       77 HPS   PIC S9(9) USAGE BINARY.
      *       Intermediate and end points
       01 X-ARRAY.
          02 X  PIC S9(9) USAGE BINARY OCCURS 2 TIMES.
       01 Y-ARRAY.
          02 Y  PIC S9(9) USAGE BINARY OCCURS 2 TIMES.
```

GpiPolyFillet - GIPFLT

```
       CALL "GIPFLT" USING  HPS, COUNT-1, X-ARRAY, Y-ARRAY.

      *          Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *          Number of points
       77 COUNT-1   PIC S9(9) USAGE BINARY.
      *          Array of points
       01 X-ARRAY.
          02 X      PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
       01 Y-ARRAY.
          02 Y      PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
```

GpiPolyFilletSharp - GIPFLS

```
CALL "GIPFLS" USING  HPS, COUNT-1, X-ARRAY, Y-ARRAY, SHARPNESS-ARRAY.

*           Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*           Count of points
 77 COUNT-1     PIC S9(9) USAGE BINARY.
*           An array of points
 01 X-ARRAY.
    02 X        PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
 01 Y-ARRAY.
    02 Y        PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
*           Array of sharpness values
 01 SHARPNESS-ARRAY.
    02 SHARPNESS  PIC S9(9) USAGE BINARY OCCURS count-1/2 TIMES.
```

GpiPolyLine - GIPLNE

```
CALL "GIPLNE" USING  HPS, COUNT-1, X-ARRAY, Y-ARRAY.

*          Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*          Number of points
 77 COUNT-1   PIC S9(9) USAGE BINARY.
*          Array of points
 01 X-ARRAY.
    02 X      PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
 01 Y-ARRAY.
    02 Y      PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
```

GpiPolyMarker - GIMRKS

```
CALL "GIMRKS" USING   HPS, COUNT-1, X-ARRAY, Y-ARRAY.

*          Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*          Number of points
 77 COUNT-1   PIC S9(9) USAGE BINARY.
*          Array of points
 01 X-ARRAY.
    02 X      PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
 01 Y-ARRAY.
    02 Y      PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
```

GpiPolySpline - GIPSPL

```
CALL "GIPSPL" USING  HPS, COUNT-1, X-ARRAY, Y-ARRAY.

*          Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*          Count of points
 77 COUNT-1   PIC S9(9) USAGE BINARY.
*          An array of points
 01 X-ARRAY.
    02 X      PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
 01 Y-ARRAY.
    02 Y      PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
```

GpiPop - GSPOP

```
CALL "GSPOP" USING   HPS, COUNT-1.

*          Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*          Number of attributes to be restored
 77 COUNT-1   PIC S9(9) USAGE BINARY.
```

GpiPtInRegion - GIPIR

```
CALL "GIPIR" USING  HPS, HRGN, X, Y, INSIDE.

*          Presentation-space handle
 77 HPS      PIC S9(9) USAGE BINARY.
*          Region handle
 77 HRGN     PIC S9(9) USAGE BINARY.
*          Point to be checked
 77 X        PIC S9(9) USAGE BINARY.
 77 Y        PIC S9(9) USAGE BINARY.
*          Inside/error indicator
 77 INSIDE   PIC S9(9) USAGE BINARY.
```

GpiPtVisible - GIPVIS

```
CALL "GIPVIS" USING  HPS, X, Y, VISIBILITY.

*             Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*             Point to be checked
 77 X           PIC S9(9) USAGE BINARY.
 77 Y           PIC S9(9) USAGE BINARY.
*             Visibility indicator
 77 VISIBILITY  PIC S9(9) USAGE BINARY.
```

GpiPutData - GSPUT

```
CALL "GSPUT" USING   HPS, FORMAT, LENGTH-1, DATA-1.

*           Presentation-space handle
 77 HPS        PIC S9(9) USAGE BINARY.
*           Coordinate type used
 77 FORMAT     PIC S9(9) USAGE BINARY.
*           Length of graphic data
 77 LENGTH-1   PIC S9(9) USAGE BINARY.
*           Orders to be copied
 77 DATA-1     PIC X(length-1).
```

GpiQueryArcParams - GIQAP

```
CALL "GIQAP" USING   HPS, ARCPARAMS.

*            Presentation-space handle
 77 HPS           PIC S9(9) USAGE BINARY.
*            Arc parameters
 01 ARCPARAMS.
    COPY ARCPARML.
```

GpiQueryAttrMode - GSQAM

```
CALL "GSQAM" USING    HPS, MODE-1.

*         Presentation-space handle
 77 HPS      PIC S9(9) USAGE BINARY.
*         Current attribute mode
 77 MODE-1   PIC S9(9) USAGE BINARY.
```

GpiQueryAttrs - GIQATR

```
CALL "GIQATR" USING   HPS, PRIMTYPE, ATTRMASK, ATTRS, DEFMASK.

*           Presentation-space handle
 77 HPS        PIC S9(9) USAGE BINARY.
*           Primitive type
 77 PRIMTYPE   PIC S9(9) USAGE BINARY.
*           Attributes mask
 77 ATTRMASK   PIC S9(9) USAGE BINARY.
*           Attributes
 01 ATTRS.
    COPY BUNDLE.
*           Defaults mask
 77 DEFMASK    PIC S9(9) USAGE BINARY.
```

GpiQueryBackColor - GSQBCO

```
CALL "GSQBCO" USING    HPS, COLOR.

*         Presentation-space handle
 77 HPS      PIC S9(9) USAGE BINARY.
*         Background color
 77 COLOR    PIC S9(9) USAGE BINARY.
```

GpiQueryBackMix - GSQBMX

```
CALL "GSQBMX" USING    HPS, MIXMODE.

*          Presentation-space handle
 77 HPS        PIC S9(9) USAGE BINARY.
*          Background mix
 77 MIXMODE    PIC S9(9) USAGE BINARY.
```

GpiQueryBitmapBits - GSQBB

```
CALL "GSQBB" USING   HPS, SCANSTART, SCANS, BUFFER, INFOTABLE, SCANSRETURNED.

*                Presentation-space handle
 77 HPS               PIC S9(9) USAGE BINARY.
*                Starting line number
 77 SCANSTART         PIC S9(9) USAGE BINARY.
*                Number of scan lines to be returned
 77 SCANS             PIC S9(9) USAGE BINARY.
*                Data area
 77 BUFFER            PIC X(n).
*                Bit-map information table
 01 INFOTABLE.
    COPY BITINF REPLACING BITINF-DIM BY n.
*                Number of scan lines actually returned
 77 SCANSRETURNED     PIC S9(9) USAGE BINARY.
```

GpiQueryBitmapDimension - GSQBTD

```
CALL "GSQBTD" USING    HBM, WIDTH, HEIGHT.

*         Bit-map handle
 77 HBM      PIC S9(9) USAGE BINARY.
*         Size of bit map
 77 WIDTH    PIC S9(9) USAGE BINARY.
 77 HEIGHT   PIC S9(9) USAGE BINARY.
```

GpiQueryBitmapHandle - GSQBTH

```
       CALL "GSQBTH" USING    HPS, LCID, HBM.

    *        Presentation-space handle
     77 HPS    PIC S9(9) USAGE BINARY.
    *        Local identifier
     77 LCID   PIC S9(9) USAGE BINARY.
    *        Bit-map handle
     77 HBM    PIC S9(9) USAGE BINARY.
```

GpiQueryBitmapParameters - GSQBTP

```
       CALL "GSQBTP" USING    HBM, DATA-1.

    *         Bit-map handle
     77 HBM       PIC S9(9) USAGE BINARY.
    *         Bit-map information header
     01 DATA-1.
        COPY BITINFH.
```

GpiQueryBoundaryData - GIQBD

```
       CALL "GIQBD" USING   HPS, XLEFT, YBOTTOM, XRIGHT, YTOP.

    *          Presentation-space handle
     77 HPS         PIC S9(9) USAGE BINARY.
    *          Boundary data
     77 XLEFT       PIC S9(9) USAGE BINARY.
     77 YBOTTOM     PIC S9(9) USAGE BINARY.
     77 XRIGHT      PIC S9(9) USAGE BINARY.
     77 YTOP        PIC S9(9) USAGE BINARY.
```

GpiQueryCharAngle - GIQCA

```
       CALL "GIQCA" USING   HPS, X, Y.

    *        Presentation-space handle
     77 HPS    PIC S9(9) USAGE BINARY.
    *        Baseline angle
     77 X      PIC S9(9) USAGE BINARY.
     77 Y      PIC S9(9) USAGE BINARY.
```

GpiQueryCharBox - GIQCB

```
       CALL "GIQCB" USING   HPS, WIDTH, HEIGHT.

    *         Presentation-space handle
     77 HPS       PIC S9(9) USAGE BINARY.
    *         Character-box size
     77 WIDTH     PIC S9(9) USAGE BINARY.
     77 HEIGHT    PIC S9(9) USAGE BINARY.
```

GpiQueryCharDirection - GSQCD

```
       CALL "GSQCD" USING    HPS, DIRECTION.

    *            Presentation-space handle
     77 HPS          PIC S9(9) USAGE BINARY.
    *            Character direction
     77 DIRECTION    PIC S9(9) USAGE BINARY.
```

GpiQueryCharMode - GSQCM

```
       CALL "GSQCM" USING    HPS, MODE-1.

    *         Presentation-space handle
     77 HPS       PIC S9(9) USAGE BINARY.
    *         Character mode
     77 MODE-1    PIC S9(9) USAGE BINARY.
```

GpiQueryCharSet - GSQCS

```
      CALL "GSQCS" USING   HPS, LCID.

      *       Presentation-space handle
       77 HPS   PIC S9(9) USAGE BINARY.
      *       Character-set local identifier
       77 LCID  PIC S9(9) USAGE BINARY.
```

GpiQueryCharShear - GIQCH

```
      CALL "GIQCH" USING   HPS, X, Y.

      *       Presentation-space handle
       77 HPS   PIC S9(9) USAGE BINARY.
      *       Character shear
       77 X     PIC S9(9) USAGE BINARY.
       77 Y     PIC S9(9) USAGE BINARY.
```

GpiQueryCharStringPos - GIQCPO

```
      CALL "GIQCPO" USING   HPS, OPTIONS, COUNT-1, STRING-1, XINCREMENTS-ARRAY, X-ARRAY,
                            Y-ARRAY.

      *              Presentation-space handle
       77 HPS           PIC S9(9) USAGE BINARY.
      *              Option flag
       77 OPTIONS       PIC S9(9) USAGE BINARY.
      *              Length of the string
       77 COUNT-1       PIC S9(9) USAGE BINARY.
      *              The character string to be examined
       77 STRING-1      PIC X(count-1).
      *              Vector of x increment values
       01 XINCREMENTS-ARRAY.
          02 XINCREMENTS  PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
      *              Array of points
       01 X-ARRAY.
          02 X          PIC S9(9) USAGE BINARY OCCURS count-1 +1 TIMES.
       01 Y-ARRAY.
          02 Y          PIC S9(9) USAGE BINARY OCCURS count-1 +1 TIMES.
```

GpiQueryCharStringPosAt - GIQCRO

```
      CALL "GIQCRO" USING   HPS, X, Y, OPTIONS, COUNT-1, STRING-1, XINCREMENTS-ARRAY,
                            X-2-ARRAY, Y-2-ARRAY.

      *              Presentation-space handle
       77 HPS           PIC S9(9) USAGE BINARY.
      *              Starting position
       77 X             PIC S9(9) USAGE BINARY.
       77 Y             PIC S9(9) USAGE BINARY.
      *              Option flags
       77 OPTIONS       PIC S9(9) USAGE BINARY.
      *              Length of the string
       77 COUNT-1       PIC S9(9) USAGE BINARY.
      *              Character string to be examined
       77 STRING-1      PIC X(count-1).
      *              Vector of x increment values
       01 XINCREMENTS-ARRAY.
          02 XINCREMENTS  PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
      *              Array of points, in which the positions of each character in world
      coordinates are returned
       01 X-2-ARRAY.
          02 X-2        PIC S9(9) USAGE BINARY OCCURS count-1 +1 TIMES.
       01 Y-2-ARRAY.
          02 Y-2        PIC S9(9) USAGE BINARY OCCURS count-1 +1 TIMES.
```

GpiQueryClipBox - GIQCLB

```
       CALL "GIQCLB" USING   HPS, XLEFT, YBOTTOM, XRIGHT, YTOP, COMPLEXITY.

      *             Presentation-space handle
       77 HPS           PIC S9(9) USAGE BINARY.
      *             Bounding rectangle
       77 XLEFT          PIC S9(9) USAGE BINARY.
       77 YBOTTOM        PIC S9(9) USAGE BINARY.
       77 XRIGHT         PIC S9(9) USAGE BINARY.
       77 YTOP           PIC S9(9) USAGE BINARY.
      *             Complexity/error indicator
       77 COMPLEXITY     PIC S9(9) USAGE BINARY.
```

GpiQueryClipRegion - GSQCLR

```
       CALL "GSQCLR" USING    HPS, HRGN.

      *       Presentation-space handle
       77 HPS   PIC S9(9) USAGE BINARY.
      *       Clip-region handle (if any)
       77 HRGN  PIC S9(9) USAGE BINARY.
```

GpiQueryColor - GSQCOL

```
       CALL "GSQCOL" USING    HPS, COLOR.

      *        Presentation-space handle
       77 HPS      PIC S9(9) USAGE BINARY.
      *        Color attribute
       77 COLOR    PIC S9(9) USAGE BINARY.
```

GpiQueryColorData - GSQCOD

```
       CALL "GSQCOD" USING    HPS, COUNT-1, ARRAY-ARRAY.

      *          Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *          Number of elements
       77 COUNT-1   PIC S9(9) USAGE BINARY.
      *          Array
       01 ARRAY-ARRAY.
          02 ARRAY  PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
```

GpiQueryColorIndex - GSQCOI

```
       CALL "GSQCOI" USING   HPS, OPTIONS, RGBCOLOR, INDEX-1.

      *           Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *           Options
       77 OPTIONS      PIC S9(9) USAGE BINARY.
      *           Specifies a color in RGB terms
       77 RGBCOLOR     PIC S9(9) USAGE BINARY.
      *           Color index providing closest match to the specified color
       77 INDEX-1      PIC S9(9) USAGE BINARY.
```

GpiQueryCp - GSQCPG

```
       CALL "GSQCPG" USING    HPS, CODEPAGE.

      *           Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *           Code page
       77 CODEPAGE     PIC S9(9) USAGE BINARY.
```

GpiQueryCurrentPosition - GIQCP

```
CALL "GIQCP" USING   HPS, X, Y.

*       Presentation-space handle
 77 HPS   PIC S9(9) USAGE BINARY.
*       Current position
 77 X     PIC S9(9) USAGE BINARY.
 77 Y     PIC S9(9) USAGE BINARY.
```

GpiQueryDefArcParams - GIQDAP

```
CALL "GIQDAP" USING   HPS, ARCPARAMS.

*            Presentation-space handle
 77 HPS           PIC S9(9) USAGE BINARY.
*            Default arc parameters
 01 ARCPARAMS.
    COPY ARCPARML.
```

GpiQueryDefAttrs - GIQDAT

```
CALL "GIQDAT" USING   HPS, PRIMTYPE, ATTRMASK, ATTRS.

*           Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*           Primitive type
 77 PRIMTYPE    PIC S9(9) USAGE BINARY.
*           Attributes mask
 77 ATTRMASK    PIC S9(9) USAGE BINARY.
*           Attributes
 01 ATTRS.
    COPY BUNDLE.
```

GpiQueryDefaultViewMatrix - GIQDVM

```
CALL "GIQDVM" USING    HPS, COUNT-1, ARRAY.

*          Presentation-space handle
 77 HPS        PIC S9(9) USAGE BINARY.
*          Number of elements
 77 COUNT-1    PIC S9(9) USAGE BINARY.
*          Transform matrix
 01 ARRAY.
    COPY MATRIXLF.
```

GpiQueryDefCharBox - GIQCEL

```
CALL "GIQCEL" USING   HPS, WIDTH, HEIGHT.

*         Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*         Default character-box size
 77 WIDTH     PIC S9(9) USAGE BINARY.
 77 HEIGHT    PIC S9(9) USAGE BINARY.
```

GpiQueryDefTag - GSQDTA

```
CALL "GSQDTA" USING    HPS, TAG.

*       Presentation-space handle
 77 HPS   PIC S9(9) USAGE BINARY.
*       Default tag identifier
 77 TAG   PIC S9(9) USAGE BINARY.
```

GpiQueryDefViewingLimits - GIQDVL

```
       CALL "GIQDVL" USING   HPS, XLEFT, YBOTTOM, XRIGHT, YTOP.

      *          Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *          Default viewing limits
       77 XLEFT       PIC S9(9) USAGE BINARY.
       77 YBOTTOM     PIC S9(9) USAGE BINARY.
       77 XRIGHT      PIC S9(9) USAGE BINARY.
       77 YTOP        PIC S9(9) USAGE BINARY.
```

GpiQueryDevice - GSQD

```
       CALL "GSQD" USING   HPS, HDC.

      *       Presentation-space handle
       77 HPS   PIC S9(9) USAGE BINARY.
      *       Device-context handle
       77 HDC   PIC S9(9) USAGE BINARY.
```

GpiQueryDeviceBitmapFormats - GSQDBF

```
       CALL "GSQDBF" USING    HPS, COUNT-1, ARRAY-ARRAY.

      *          Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *          Number of elements
       77 COUNT-1    PIC S9(9) USAGE BINARY.
      *          Data array
       01 ARRAY-ARRAY.
          02 ARRAY   PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
```

GpiQueryDrawControl - GSQDC

```
       CALL "GSQDC" USING    HPS, CONTROL-1, VALUE-1.

      *            Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *            Control whose value is to be returned
       77 CONTROL-1    PIC S9(9) USAGE BINARY.
      *            Value of the control
       77 VALUE-1      PIC S9(9) USAGE BINARY.
```

GpiQueryDrawingMode - GSQDM

```
       CALL "GSQDM" USING    HPS, MODE-1.

      *         Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *         Drawing mode
       77 MODE-1    PIC S9(9) USAGE BINARY.
```

GpiQueryEditMode - GSQEDM

```
       CALL "GSQEDM" USING    HPS, MODE-1.

      *         Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *         Current editing mode
       77 MODE-1    PIC S9(9) USAGE BINARY.
```

GpiQueryElementPointer - GSQEP

```
       CALL "GSQEP" USING   HPS, ELEMENT.

      *          Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *          Current element pointer
       77 ELEMENT    PIC S9(9) USAGE BINARY.
```

GpiQueryElementType - GSQETS

```
CALL "GSQETS" USING   HPS, TYPE-1, LENGTH-1, LENGTH-2, STRING-1, REQLENGTH.

*           Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*           Element type
 77 TYPE-1      PIC S9(9) USAGE BINARY.
*           Data length
 77 LENGTH-1    PIC S9(9) USAGE BINARY.
*           Description of data buffer ( LENGTH-2 is result string length)
 77 LENGTH-2    PIC S9(9) USAGE BINARY.
 77 STRING-1    PIC X(length-1).
*           Size of the data required to hold the element content
 77 REQLENGTH   PIC S9(9) USAGE BINARY.
```

GpiQueryFontFileDescriptions - GSQFD

```
CALL "GSQFD" USING   HAB, LENGTH-1, STRING-1, COUNT-1, NAMES-ARRAY, REMFONTS.

*           Anchor-block handle
 77 HAB        PIC S9(9) USAGE BINARY.
*           Fully qualified filename
 77 LENGTH-1   PIC S9(9) USAGE BINARY.
 77 STRING-1   PIC X(length-1).
*           Maximum number of family and facename pairs to be returned
 77 COUNT-1    PIC S9(9) USAGE BINARY.
*           Array of font file descriptors
 01 NAMES-ARRAY.
    02 NAMES OCCURS count-1 TIMES.
       COPY FFDESCS.
*           Returns
 77 REMFONTS   PIC S9(9) USAGE BINARY.
```

GpiQueryFontMetrics - GSQFM

```
CALL "GSQFM" USING   HPS, METRICSLENGTH, METRICS.

*               Presentation-space handle
 77 HPS             PIC S9(9) USAGE BINARY.
*               Length of metrics
 77 METRICSLENGTH   PIC S9(9) USAGE BINARY.
*               Metrics of font
 01 METRICS.
    COPY FMETRS.
```

GpiQueryFonts - GSQF

```
CALL "GSQF" USING   HPS, OPTIONS, LENGTH-1, STRING-1, REQFONTS, METRICSLENGTH,
                    METRICS-ARRAY, REMFONTS.

*               Presentation-space handle
 77 HPS             PIC S9(9) USAGE BINARY.
*               Enumeration options
 77 OPTIONS         PIC S9(9) USAGE BINARY.
*               Facename of fonts
 77 LENGTH-1        PIC S9(9) USAGE BINARY.
 77 STRING-1        PIC X(length-1).
*               Count of fonts
 77 REQFONTS        PIC S9(9) USAGE BINARY.
*               Length of metrics
 77 METRICSLENGTH   PIC S9(9) USAGE BINARY.
*               Metrics of font
 01 METRICS-ARRAY.
    02 METRICS OCCURS reqfonts TIMES.
       COPY FMETRS.
*               Count of fonts not returned
 77 REMFONTS        PIC S9(9) USAGE BINARY.
```

GpiQueryGraphicsField - GIQFLD

```
CALL "GIQFLD" USING   HPS, XLEFT, YBOTTOM, XRIGHT, YTOP.

*          Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*          Graphics field
 77 XLEFT       PIC S9(9) USAGE BINARY.
 77 YBOTTOM     PIC S9(9) USAGE BINARY.
 77 XRIGHT      PIC S9(9) USAGE BINARY.
 77 YTOP        PIC S9(9) USAGE BINARY.
```

GpiQueryInitialSegmentAttrs - GSQATI

```
CALL "GSQATI" USING   HPS, ATTRIBUTE, VALUE-1.

*            Presentation-space handle
 77 HPS          PIC S9(9) USAGE BINARY.
*            Attribute to be queried
 77 ATTRIBUTE    PIC S9(9) USAGE BINARY.
*            Current initial attribute value
 77 VALUE-1      PIC S9(9) USAGE BINARY.
```

GpiQueryKerningPairs - GSQKPR

```
CALL "GSQKPR" USING    HPS, COUNT-1, DATA-1-ARRAY, RETURNED.

*            Presentation-space handle
 77 HPS          PIC S9(9) USAGE BINARY.
*            The number of elements in Data
 77 COUNT-1      PIC S9(9) USAGE BINARY.
*            Kerning pairs
 01 DATA-1-ARRAY.
    02 DATA-1 OCCURS count-1 TIMES.
       COPY KERNPAIR.
*            Number returned/error indicator
 77 RETURNED     PIC S9(9) USAGE BINARY.
```

GpiQueryLineEnd - GSQLE

```
CALL "GSQLE" USING    HPS, LINEEND.

*          Presentation-space handle
 77 HPS        PIC S9(9) USAGE BINARY.
*          Line end
 77 LINEEND    PIC S9(9) USAGE BINARY.
```

GpiQueryLineJoin - GSQLJ

```
CALL "GSQLJ" USING   HPS, LINEJOIN.

*           Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*           Line join
 77 LINEJOIN    PIC S9(9) USAGE BINARY.
```

GpiQueryLineType - GSQLT

```
CALL "GSQLT" USING   HPS, LINETYPE.

*           Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*           Line type
 77 LINETYPE    PIC S9(9) USAGE BINARY.
```

GpiQueryLineWidth - GIQLW

```
CALL "GIQLW" USING   HPS, LINEWIDTH.

*           Presentation-space handle
 77 HPS        PIC S9(9) USAGE BINARY.
*           Line width
 77 LINEWIDTH   PIC S9(9) USAGE BINARY.
```

GpiQueryLineWidthGeom - GIQGLW

```
CALL "GIQGLW" USING   HPS, LINEWIDTH.

*           Presentation-space handle
 77 HPS        PIC S9(9) USAGE BINARY.
*           Geometric line width
 77 LINEWIDTH   PIC S9(9) USAGE BINARY.
```

GpiQueryLogColorTable - GSQLCT

```
CALL "GSQLCT" USING   HPS, OPTIONS, START-1, COUNT-1, ARRAY-ARRAY, RETCOUNT.

*           Presentation-space handle
 77 HPS        PIC S9(9) USAGE BINARY.
*           Specifies options
 77 OPTIONS    PIC S9(9) USAGE BINARY.
*           The starting index for which data is to be returned
 77 START-1    PIC S9(9) USAGE BINARY.
*           Count of elements
 77 COUNT-1    PIC S9(9) USAGE BINARY.
*           An array in which the information is returned
 01 ARRAY-ARRAY.
    02 ARRAY    PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
*           Number of elements returned/error indicator
 77 RETCOUNT    PIC S9(9) USAGE BINARY.
```

GpiQueryMarker - GSQMS

```
CALL "GSQMS" USING   HPS, SYMBOL.

*         Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*         Marker symbol
 77 SYMBOL    PIC S9(9) USAGE BINARY.
```

GpiQueryMarkerBox - GIQMB

```
CALL "GIQMB" USING   HPS, WIDTH, HEIGHT.

*         Presentation-space handle
 77 HPS      PIC S9(9) USAGE BINARY.
*         Size of marker box
 77 WIDTH    PIC S9(9) USAGE BINARY.
 77 HEIGHT   PIC S9(9) USAGE BINARY.
```

GpiQueryMarkerSet - GSQMSS

```
CALL "GSQMSS" USING   HPS, SET-1.

*        Presentation-space handle
 77 HPS    PIC S9(9) USAGE BINARY.
*        Marker set local identifier
 77 SET-1  PIC S9(9) USAGE BINARY.
```

GpiQueryMetaFileBits - GSMGB

```
       CALL "GSMGB" USING    HMF, OFFSET, LENGTH-1, DATA-1.

      *           Memory-metafile handle
       77 HMF        PIC S9(9) USAGE BINARY.
      *           Byte offset
       77 OFFSET     PIC S9(9) USAGE BINARY.
      *           Length in bytes of the metafile data to copy
       77 LENGTH-1   PIC S9(9) USAGE BINARY.
      *           Metafile data
       77 DATA-1     PIC X(length-1).
```

GpiQueryMetaFileLength - GSQMFL

```
       CALL "GSQMFL" USING    HMF, LENGTH-1.

      *           Memory-metafile handle
       77 HMF        PIC S9(9) USAGE BINARY.
      *           Total length of the metafile
       77 LENGTH-1   PIC S9(9) USAGE BINARY.
```

GpiQueryMix - GSQMIX

```
       CALL "GSQMIX" USING    HPS, MIXMODE.

      *          Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *          Mix mode
       77 MIXMODE    PIC S9(9) USAGE BINARY.
```

GpiQueryModelTransformMatrix - GIQCTM

```
       CALL "GIQCTM" USING    HPS, COUNT-1, ARRAY.

      *          Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *          Number of elements
       77 COUNT-1    PIC S9(9) USAGE BINARY.
      *          Transform matrix
       01 ARRAY.
          COPY MATRIXLF.
```

GpiQueryNearestColor - GSQNC

```
       CALL "GSQNC" USING    HPS, OPTIONS, RGBIN, RGBOUT.

      *          Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *          Options
       77 OPTIONS    PIC S9(9) USAGE BINARY.
      *          Required color
       77 RGBIN      PIC S9(9) USAGE BINARY.
      *          Nearest available color to the one specified
       77 RGBOUT     PIC S9(9) USAGE BINARY.
```

GpiQueryNumberSetIds - GSQNSS

```
       CALL "GSQNSS" USING    HPS, COUNT-1.

      *          Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *          Number of lcids
       77 COUNT-1    PIC S9(9) USAGE BINARY.
```

GpiQueryPageViewport - GIQPV

```
      CALL "GIQPV" USING   HPS, XLEFT, YBOTTOM, XRIGHT, YTOP.

*          Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*          Page viewport
 77 XLEFT       PIC S9(9) USAGE BINARY.
 77 YBOTTOM     PIC S9(9) USAGE BINARY.
 77 XRIGHT      PIC S9(9) USAGE BINARY.
 77 YTOP        PIC S9(9) USAGE BINARY.
```

GpiQueryPattern - GSQPAT

```
      CALL "GSQPAT" USING    HPS, PATTERNSYMBOL.

*                Presentation-space handle
 77 HPS               PIC S9(9) USAGE BINARY.
*                Pattern symbol
 77 PATTERNSYMBOL     PIC S9(9) USAGE BINARY.
```

GpiQueryPatternRefPoint - GIQPRP

```
      CALL "GIQPRP" USING   HPS, X, Y.

*       Presentation-space handle
 77 HPS   PIC S9(9) USAGE BINARY.
*       Pattern reference point
 77 X     PIC S9(9) USAGE BINARY.
 77 Y     PIC S9(9) USAGE BINARY.
```

GpiQueryPatternSet - GSQPTS

```
      CALL "GSQPTS" USING    HPS, SET-1.

*        Presentation-space handle
 77 HPS    PIC S9(9) USAGE BINARY.
*        Pattern-set local identifier
 77 SET-1  PIC S9(9) USAGE BINARY.
```

GpiQueryPel - GIQPEL

```
      CALL "GIQPEL" USING   HPS, X, Y, COLOR.

*        Presentation-space handle
 77 HPS      PIC S9(9) USAGE BINARY.
*        Position in world coordinates
 77 X        PIC S9(9) USAGE BINARY.
 77 Y        PIC S9(9) USAGE BINARY.
*        Color index of the pel
 77 COLOR    PIC S9(9) USAGE BINARY.
```

GpiQueryPickAperturePosition - GIQPAP

```
      CALL "GIQPAP" USING   HPS, X, Y.

*       Presentation-space handle
 77 HPS   PIC S9(9) USAGE BINARY.
*       Pick aperture position
 77 X     PIC S9(9) USAGE BINARY.
 77 Y     PIC S9(9) USAGE BINARY.
```

GpiQueryPickApertureSize - GIQPAS

```
      CALL "GIQPAS" USING   HPS, WIDTH, HEIGHT.

*         Presentation-space handle
 77 HPS      PIC S9(9) USAGE BINARY.
*         Pick aperture size
 77 WIDTH    PIC S9(9) USAGE BINARY.
 77 HEIGHT   PIC S9(9) USAGE BINARY.
```

GpiQueryPS - GIPQRY

```
       CALL "GIPQRY" USING   HPS, WIDTH, HEIGHT, OPTIONS.

      *          Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *          Presentation-page size
       77 WIDTH     PIC S9(9) USAGE BINARY.
       77 HEIGHT    PIC S9(9) USAGE BINARY.
      *          Presentation-space options
       77 OPTIONS   PIC S9(9) USAGE BINARY.
```

GpiQueryRealColors - GSQRC

```
       CALL "GSQRC" USING    HPS, OPTIONS, START-1, COUNT-1, COLORS-ARRAY, RETCOUNT.

      *           Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *           Options
       77 OPTIONS     PIC S9(9) USAGE BINARY.
      *           Ordinal number of the first color required
       77 START-1     PIC S9(9) USAGE BINARY.
      *           Maximum number of elements
       77 COUNT-1     PIC S9(9) USAGE BINARY.
      *           Array in which the information is returned
       01 COLORS-ARRAY.
          02 COLORS   PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
      *           Number of elements returned
       77 RETCOUNT    PIC S9(9) USAGE BINARY.
```

GpiQueryRegionBox - GIQRB

```
       CALL "GIQRB" USING   HPS, HRGN, XLEFT, YBOTTOM, XRIGHT, YTOP, COMPLEXITY.

      *             Presentation-space handle
       77 HPS           PIC S9(9) USAGE BINARY.
      *             Region handle
       77 HRGN          PIC S9(9) USAGE BINARY.
      *             Bounding rectangle
       77 XLEFT         PIC S9(9) USAGE BINARY.
       77 YBOTTOM       PIC S9(9) USAGE BINARY.
       77 XRIGHT        PIC S9(9) USAGE BINARY.
       77 YTOP          PIC S9(9) USAGE BINARY.
      *             Complexity of region/error indicator
       77 COMPLEXITY    PIC S9(9) USAGE BINARY.
```

GpiQueryRegionRects - GIQRR

```
      CALL "GIQRR" USING   HPS, HRGN, XLEFT, YBOTTOM, XRIGHT, YTOP, CONTROL-1, XLEFT-2-ARRAY,
                           YBOTTOM-2-ARRAY, XRIGHT-2-ARRAY, YTOP-2-ARRAY.

*            Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*            Region handle
 77 HRGN        PIC S9(9) USAGE BINARY.
*            Bounding rectangle
 77 XLEFT       PIC S9(9) USAGE BINARY.
 77 YBOTTOM     PIC S9(9) USAGE BINARY.
 77 XRIGHT      PIC S9(9) USAGE BINARY.
 77 YTOP        PIC S9(9) USAGE BINARY.
*            Processing-control structure
 01 CONTROL-1.
    COPY RGNRECT.
*            Array of rectangle structures, in which the rectangles are returned
 01 XLEFT-2-ARRAY.
    02 XLEFT-2   PIC S9(9) USAGE BINARY OCCURS rgnrect.count TIMES.
 01 YBOTTOM-2-ARRAY.
    02 YBOTTOM-2 PIC S9(9) USAGE BINARY OCCURS rgnrect.count TIMES.
 01 XRIGHT-2-ARRAY.
    02 XRIGHT-2  PIC S9(9) USAGE BINARY OCCURS rgnrect.count TIMES.
 01 YTOP-2-ARRAY.
    02 YTOP-2    PIC S9(9) USAGE BINARY OCCURS rgnrect.count TIMES.
```

GpiQueryRGBColor - GSQRGB

```
      CALL "GSQRGB" USING    HPS, OPTIONS, COLORINDEX, RGBCOLOR.

*            Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*            Options
 77 OPTIONS     PIC S9(9) USAGE BINARY.
*            Color index
 77 COLORINDEX  PIC S9(9) USAGE BINARY.
*            RGB color providing closest match to the specified color index
 77 RGBCOLOR    PIC S9(9) USAGE BINARY.
```

GpiQuerySegmentAttrs - GSQATS

```
      CALL "GSQATS" USING    HPS, SEGID, ATTRIBUTE, VALUE-1.

*            Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*            Segment identifier; must be greater than 0
 77 SEGID       PIC S9(9) USAGE BINARY.
*            Attribute to be queried
 77 ATTRIBUTE   PIC S9(9) USAGE BINARY.
*            Current attribute value
 77 VALUE-1     PIC S9(9) USAGE BINARY.
```

GpiQuerySegmentNames - GSQNAM

```
       CALL "GSQNAM" USING    HPS, FIRSTSEGID, LASTSEGID, MAX, SEGIDS-ARRAY, RETCOUNT.

      *            Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *            First segment in the range; must be greater than 0
       77 FIRSTSEGID   PIC S9(9) USAGE BINARY.
      *            Last segment in the range; must be greater than 0
       77 LASTSEGID    PIC S9(9) USAGE BINARY.
      *            Maximum number
       77 MAX          PIC S9(9) USAGE BINARY.
      *            Array in which the required identifiers are returned
       01 SEGIDS-ARRAY.
          02 SEGIDS    PIC S9(9) USAGE BINARY OCCURS max TIMES.
      *            Number of identifiers returned
       77 RETCOUNT     PIC S9(9) USAGE BINARY.
```

GpiQuerySegmentPriority - GSQPRI

```
       CALL "GSQPRI" USING   HPS, REFSEGID, ORDER-1, SEGID.

      *          Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *          Reference segment identifier
       77 REFSEGID    PIC S9(9) USAGE BINARY.
      *          Segment higher or lower
       77 ORDER-1     PIC S9(9) USAGE BINARY.
      *          Segment identifier
       77 SEGID       PIC S9(9) USAGE BINARY.
```

GpiQuerySegmentTransformMatrix - GIQTFM

```
       CALL "GIQTFM" USING   HPS, SEGID, COUNT-1, ARRAY.

      *          Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *          Segment identifier
       77 SEGID      PIC S9(9) USAGE BINARY.
      *          Number of elements
       77 COUNT-1    PIC S9(9) USAGE BINARY.
      *          Transform matrix
       01 ARRAY.
          COPY MATRIXLF.
```

GpiQuerySetIds - GSQSS

```
       CALL "GSQSS" USING    HPS, COUNT-1, TYPES-ARRAY, NAMES-ARRAY, LCIDS-ARRAY.

      *          Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *          The number of objects to be queried
       77 COUNT-1    PIC S9(9) USAGE BINARY.
      *          Object types
       01 TYPES-ARRAY.
          02 TYPES   PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
      *          Font names
       01 NAMES-ARRAY.
          02 NAMES   PIC X(8) OCCURS count-1 TIMES.
      *          Local identifiers
       01 LCIDS-ARRAY.
          02 LCIDS   PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
```

GpiQueryStopDraw - GSQSDW

```
CALL "GSQSDW" USING    HPS, VALUE-1.

*          Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*          Stop draw condition indicator
 77 VALUE-1   PIC S9(9) USAGE BINARY.
```

GpiQueryTag - GSQTAG

```
CALL "GSQTAG" USING    HPS, TAG.

*       Presentation-space handle
 77 HPS   PIC S9(9) USAGE BINARY.
*       Tag identifier
 77 TAG   PIC S9(9) USAGE BINARY.
```

GpiQueryTextBox - GIQTB

```
CALL "GIQTB" USING   HPS, COUNT1, STRING-1, COUNT2, X-ARRAY, Y-ARRAY.

*           Presentation-space handle
 77 HPS        PIC S9(9) USAGE BINARY.
*           Number of characters
 77 COUNT1     PIC S9(9) USAGE BINARY.
*           The character string
 77 STRING-1   PIC X(count1).
*           Number of points
 77 COUNT2     PIC S9(9) USAGE BINARY.
*           List of points
 01 X-ARRAY.
    02 X       PIC S9(9) USAGE BINARY OCCURS count2 TIMES.
 01 Y-ARRAY.
    02 Y       PIC S9(9) USAGE BINARY OCCURS count2 TIMES.
```

GpiQueryViewingLimits - GIQSVL

```
CALL "GIQSVL" USING   HPS, XLEFT, YBOTTOM, XRIGHT, YTOP.

*          Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*          Viewing limits
 77 XLEFT       PIC S9(9) USAGE BINARY.
 77 YBOTTOM     PIC S9(9) USAGE BINARY.
 77 XRIGHT      PIC S9(9) USAGE BINARY.
 77 YTOP        PIC S9(9) USAGE BINARY.
```

GpiQueryViewingTransformMatrix - GIQVTM

```
CALL "GIQVTM" USING   HPS, COUNT-1, ARRAY.

*          Presentation-space handle
 77 HPS        PIC S9(9) USAGE BINARY.
*          Number of elements
 77 COUNT-1    PIC S9(9) USAGE BINARY.
*          Transform matrix
 01 ARRAY.
    COPY MATRIXLF.
```

GpiQueryWidthTable - GSQFWT

```
CALL "GSQFWT" USING    HPS, FIRSTCHAR, COUNT-1, DATA-1-ARRAY.

*            Presentation-space handle
 77 HPS          PIC S9(9) USAGE BINARY.
*            Codepoint of first character
 77 FIRSTCHAR    PIC S9(9) USAGE BINARY.
*            Count of elements in data
 77 COUNT-1      PIC S9(9) USAGE BINARY.
*            Array of width values
 01 DATA-1-ARRAY.
    02 DATA-1    PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
```

GpiRealizeColorTable - GSRCT

```
CALL "GSRCT" USING   HPS.

*       Presentation-space handle
 77 HPS   PIC S9(9) USAGE BINARY.
```

GpiRectInRegion - GIRIR

```
CALL "GIRIR" USING  HPS, HRGN, XLEFT, YBOTTOM, XRIGHT, YTOP, INSIDE.

*          Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*          Region handle
 77 HRGN        PIC S9(9) USAGE BINARY.
*          Test rectangle
 77 XLEFT       PIC S9(9) USAGE BINARY.
 77 YBOTTOM     PIC S9(9) USAGE BINARY.
 77 XRIGHT      PIC S9(9) USAGE BINARY.
 77 YTOP        PIC S9(9) USAGE BINARY.
*          Inside/error indicator
 77 INSIDE      PIC S9(9) USAGE BINARY.
```

GpiRectVisible - GIRVIS

```
CALL "GIRVIS" USING  HPS, XLEFT, YBOTTOM, XRIGHT, YTOP, VISIBILITY.

*            Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*            Test rectangle, in world coordinates
 77 XLEFT       PIC S9(9) USAGE BINARY.
 77 YBOTTOM     PIC S9(9) USAGE BINARY.
 77 XRIGHT      PIC S9(9) USAGE BINARY.
 77 YTOP        PIC S9(9) USAGE BINARY.
*            Visibility indicator
 77 VISIBILITY  PIC S9(9) USAGE BINARY.
```

GpiRemoveDynamics - GSRDYN

```
CALL "GSRDYN" USING    HPS, FIRSTSEGID, LASTSEGID.

*            Presentation-space handle
 77 HPS          PIC S9(9) USAGE BINARY.
*            First segment in the section
 77 FIRSTSEGID   PIC S9(9) USAGE BINARY.
*            Last segment in the section
 77 LASTSEGID    PIC S9(9) USAGE BINARY.
```

GpiResetBoundaryData - GSRBD

```
CALL "GSRBD" USING   HPS.

*       Presentation-space handle
 77 HPS   PIC S9(9) USAGE BINARY.
```

GpiResetPS - GSRPS

```
       CALL "GSRPS" USING   HPS, OPTIONS.

      *          Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *          Reset option
       77 OPTIONS   PIC S9(9) USAGE BINARY.
```

GpiRestorePS - GSRSPS

```
       CALL "GSRSPS" USING   HPS, PSID.

      *       Presentation-space handle
       77 HPS   PIC S9(9) USAGE BINARY.
      *       Identifier of the saved presentation space that is to be restored
       77 PSID  PIC S9(9) USAGE BINARY.
```

GpiRotate - GIROT

```
       CALL "GIROT" USING   HPS, ARRAY, OPTIONS, ANGLE, X, Y.

      *          Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *          Transform matrix
       01 ARRAY.
          COPY MATRIXLF.
      *          Transform options
       77 OPTIONS   PIC S9(9) USAGE BINARY.
      *          Rotation angle
       77 ANGLE     PIC S9(9) USAGE BINARY.
      *          Center of rotation
       77 X         PIC S9(9) USAGE BINARY.
       77 Y         PIC S9(9) USAGE BINARY.
```

GpiSaveMetaFile - GSMSAV

```
       CALL "GSMSAV" USING    HMF, LENGTH-1, STRING-1.

      *           Metafile handle
       77 HMF        PIC S9(9) USAGE BINARY.
      *           Filename
       77 LENGTH-1   PIC S9(9) USAGE BINARY.
       77 STRING-1   PIC X(length-1).
```

GpiSavePS - GSSPS

```
       CALL "GSSPS" USING   HPS, PSID.

      *       Presentation-space handle
       77 HPS   PIC S9(9) USAGE BINARY.
      *       Identifier of saved presentation space
       77 PSID  PIC S9(9) USAGE BINARY.
```

GpiScale - GISCAL

```
       CALL "GISCAL" USING   HPS, ARRAY, OPTIONS, SCALE-ARRAY, X, Y.

      *          Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *          Transform matrix
       01 ARRAY.
          COPY MATRIXLF.
      *          Transform options
       77 OPTIONS   PIC S9(9) USAGE BINARY.
      *          Scale factors
       01 SCALE-ARRAY.
          02 SCALE  PIC S9(9) USAGE BINARY OCCURS 2 TIMES.
      *          Center of scale
       77 X         PIC S9(9) USAGE BINARY.
       77 Y         PIC S9(9) USAGE BINARY.
```

GpiSetArcParams - GISAP

```
       CALL "GISAP" USING   HPS, ARCPARAMS.

      *            Presentation-space handle
       77 HPS           PIC S9(9) USAGE BINARY.
      *            Arc parameters
       01 ARCPARAMS.
          COPY ARCPARML.
```

GpiSetAttrMode - GSAM

```
       CALL "GSAM" USING    HPS, MODE-1.

      *         Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *         Attribute mode
       77 MODE-1    PIC S9(9) USAGE BINARY.
```

GpiSetAttrs - GIATR

```
       CALL "GIATR" USING   HPS, PRIMTYPE, ATTRMASK, DEFMASK, ATTRS.

      *           Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *           Primitive type
       77 PRIMTYPE    PIC S9(9) USAGE BINARY.
      *           Attributes mask
       77 ATTRMASK    PIC S9(9) USAGE BINARY.
      *           Defaults mask
       77 DEFMASK     PIC S9(9) USAGE BINARY.
      *           Attributes
       01 ATTRS.
          COPY BUNDLE.
```

GpiSetBackColor - GSBCOL

```
       CALL "GSBCOL" USING    HPS, COLOR.

      *         Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *         Background color
       77 COLOR     PIC S9(9) USAGE BINARY.
```

GpiSetBackMix - GSBMIX

```
       CALL "GSBMIX" USING   HPS, MIXMODE.

      *          Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *          Background-mix mode
       77 MIXMODE     PIC S9(9) USAGE BINARY.
```

GpiSetBitmap - GSSBM

```
       CALL "GSSBM" USING    HPS, HBM, OLD.

      *        Presentation-space handle
       77 HPS    PIC S9(9) USAGE BINARY.
      *        Handle of the bit map to be set
       77 HBM    PIC S9(9) USAGE BINARY.
      *        Old bit-map handle
       77 OLD    PIC S9(9) USAGE BINARY.
```

GpiSetBitmapBits - GSBBIT

```
      CALL "GSBBIT" USING   HPS, SCANSTART, SCANS, BUFFER, INFOTABLE, SCANSSET.

*           Presentation-space handle
 77 HPS          PIC S9(9) USAGE BINARY.
*           Line number
 77 SCANSTART    PIC S9(9) USAGE BINARY.
*           Number of scan lines to be transmitted
 77 SCANS        PIC S9(9) USAGE BINARY.
*           Bit-map data buffer
 77 BUFFER       PIC X(n).
*           Bit-map information table
 01 INFOTABLE.
    COPY BITINF REPLACING BITINF-DIM BY n.
*           Number of scan lines actually set
 77 SCANSSET     PIC S9(9) USAGE BINARY.
```

GpiSetBitmapDimension - GSBDIM

```
      CALL "GSBDIM" USING   HBM, WIDTH, HEIGHT.

*         Bit-map handle
 77 HBM      PIC S9(9) USAGE BINARY.
*         Width and height of bit map
 77 WIDTH    PIC S9(9) USAGE BINARY.
 77 HEIGHT   PIC S9(9) USAGE BINARY.
```

GpiSetBitmapId - GSBMID

```
      CALL "GSBMID" USING   HPS, HBM, LCID.

*       Presentation-space handle
 77 HPS   PIC S9(9) USAGE BINARY.
*       Bit-map handle
 77 HBM   PIC S9(9) USAGE BINARY.
*       Local identifier with which the bit map is to be tagged
 77 LCID  PIC S9(9) USAGE BINARY.
```

GpiSetCharAngle - GICA

```
      CALL "GICA" USING  HPS, X, Y.

*       Presentation-space handle
 77 HPS   PIC S9(9) USAGE BINARY.
*       Baseline angle
 77 X     PIC S9(9) USAGE BINARY.
 77 Y     PIC S9(9) USAGE BINARY.
```

GpiSetCharBox - GICB

```
      CALL "GICB" USING  HPS, WIDTH, HEIGHT.

*         Presentation-space handle
 77 HPS      PIC S9(9) USAGE BINARY.
*         Character-box size in world coordinates
 77 WIDTH    PIC S9(9) USAGE BINARY.
 77 HEIGHT   PIC S9(9) USAGE BINARY.
```

GpiSetCharDirection - GSCD

```
      CALL "GSCD" USING   HPS, DIRECTION.

*           Presentation-space handle
 77 HPS         PIC S9(9) USAGE BINARY.
*           Character direction
 77 DIRECTION   PIC S9(9) USAGE BINARY.
```

GpiSetCharMode - GSCM

```
       CALL "GSCM" USING    HPS, MODE-1.

      *          Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *          Character mode
       77 MODE-1    PIC S9(9) USAGE BINARY.
```

GpiSetCharSet - GSCS

```
       CALL "GSCS" USING   HPS, LCID.

      *        Presentation-space handle
       77 HPS    PIC S9(9) USAGE BINARY.
      *        Character-set local identifier
       77 LCID   PIC S9(9) USAGE BINARY.
```

GpiSetCharShear - GICH

```
       CALL "GICH" USING   HPS, X, Y.

      *        Presentation-space handle
       77 HPS    PIC S9(9) USAGE BINARY.
      *        Character shear vector
       77 X      PIC S9(9) USAGE BINARY.
       77 Y      PIC S9(9) USAGE BINARY.
```

GpiSetClipPath - GSSCLP

```
       CALL "GSSCLP" USING    HPS, PATH, OPTIONS.

      *           Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *           Path control flag
       77 PATH       PIC S9(9) USAGE BINARY.
      *           Options
       77 OPTIONS    PIC S9(9) USAGE BINARY.
```

GpiSetClipRegion - GSSCLR

```
       CALL "GSSCLR" USING    HPS, HRGN, OLD, COMPLEXITY.

      *              Presentation-space handle
       77 HPS           PIC S9(9) USAGE BINARY.
      *              Region handle
       77 HRGN          PIC S9(9) USAGE BINARY.
      *              Old region handle (if any)
       77 OLD           PIC S9(9) USAGE BINARY.
      *              Complexity of clipping/error indicator
       77 COMPLEXITY    PIC S9(9) USAGE BINARY.
```

GpiSetColor - GSCOL

```
       CALL "GSCOL" USING    HPS, COLOR.

      *         Presentation-space handle
       77 HPS      PIC S9(9) USAGE BINARY.
      *         Color
       77 COLOR    PIC S9(9) USAGE BINARY.
```

GpiSetCp - GSCPG

```
       CALL "GSCPG" USING    HPS, CODEPAGE.

      *           Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *           Code-page id
       77 CODEPAGE     PIC S9(9) USAGE BINARY.
```

GpiSetCurrentPosition - GICP

```
       CALL "GICP" USING  HPS, X, Y.

      *       Presentation-space handle
       77 HPS   PIC S9(9) USAGE BINARY.
      *       New value of current position
       77 X     PIC S9(9) USAGE BINARY.
       77 Y     PIC S9(9) USAGE BINARY.
```

GpiSetDefArcParams - GIDAP

```
       CALL "GIDAP" USING   HPS, ARCPARAMS.

      *            Presentation-space handle
       77 HPS           PIC S9(9) USAGE BINARY.
      *            Default arc parameters
       01 ARCPARAMS.
          COPY ARCPARML.
```

GpiSetDefAttrs - GIDATR

```
       CALL "GIDATR" USING   HPS, PRIMTYPE, ATTRMASK, ATTRS.

      *           Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *           Primitive type
       77 PRIMTYPE    PIC S9(9) USAGE BINARY.
      *           Attributes mask
       77 ATTRMASK    PIC S9(9) USAGE BINARY.
      *           Default attribute values
       01 ATTRS.
          COPY BUNDLE.
```

GpiSetDefaultViewMatrix - GISDVM

```
       CALL "GISDVM" USING   HPS, COUNT-1, ARRAY, OPTIONS.

      *          Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *          Number of elements
       77 COUNT-1    PIC S9(9) USAGE BINARY.
      *          Transformation matrix
       01 ARRAY.
          COPY MATRIXLF.
      *          Transform options
       77 OPTIONS    PIC S9(9) USAGE BINARY.
```

GpiSetDefTag - GSDTAG

```
       CALL "GSDTAG" USING    HPS, TAG.

      *       Presentation-space handle
       77 HPS   PIC S9(9) USAGE BINARY.
      *       Default tag identifier
       77 TAG   PIC S9(9) USAGE BINARY.
```

GpiSetDefViewingLimits - GISDVL

```
       CALL "GISDVL" USING   HPS, XLEFT, YBOTTOM, XRIGHT, YTOP.

      *          Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *          Default viewing limits
       77 XLEFT      PIC S9(9) USAGE BINARY.
       77 YBOTTOM    PIC S9(9) USAGE BINARY.
       77 XRIGHT     PIC S9(9) USAGE BINARY.
       77 YTOP       PIC S9(9) USAGE BINARY.
```

GpiSetDrawControl - GSDC

```
       CALL "GSDC" USING   HPS, CONTROL-1, VALUE-1.

      *           Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *           Drawing control
       77 CONTROL-1    PIC S9(9) USAGE BINARY.
      *           Required value of the drawing control
       77 VALUE-1      PIC S9(9) USAGE BINARY.
```

GpiSetDrawingMode - GSDM

```
       CALL "GSDM" USING   HPS, MODE-1.

      *         Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *         Mode to be used for subsequent drawing calls
       77 MODE-1    PIC S9(9) USAGE BINARY.
```

GpiSetEditMode - GSEDM

```
       CALL "GSEDM" USING    HPS, MODE-1.

      *         Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *         Edit mode
       77 MODE-1    PIC S9(9) USAGE BINARY.
```

GpiSetElementPointer - GSEP

```
       CALL "GSEP" USING   HPS, ELEMENT.

      *          Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *          The element number required
       77 ELEMENT     PIC S9(9) USAGE BINARY.
```

GpiSetElementPointerAtLabel - GSEPLB

```
       CALL "GSEPLB" USING    HPS, LABEL-1.

      *          Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *          Required label
       77 LABEL-1   PIC S9(9) USAGE BINARY.
```

GpiSetGraphicsField - GIFLD

```
       CALL "GIFLD" USING  HPS, XLEFT, YBOTTOM, XRIGHT, YTOP.

      *          Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *          Graphics field
       77 XLEFT       PIC S9(9) USAGE BINARY.
       77 YBOTTOM     PIC S9(9) USAGE BINARY.
       77 XRIGHT      PIC S9(9) USAGE BINARY.
       77 YTOP        PIC S9(9) USAGE BINARY.
```

GpiSetInitialSegmentAttrs - GSSATI

```
       CALL "GSSATI" USING   HPS, ATTRIBUTE, VALUE-1.

      *           Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *           Segment attribute
       77 ATTRIBUTE   PIC S9(9) USAGE BINARY.
      *           Attribute value
       77 VALUE-1     PIC S9(9) USAGE BINARY.
```

GpiSetLineEnd - GSLE

```
CALL "GSLE" USING   HPS, LINEEND.

*          Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*          Style of line end
 77 LINEEND   PIC S9(9) USAGE BINARY.
```

GpiSetLineJoin - GSLJ

```
CALL "GSLJ" USING   HPS, LINEJOIN.

*          Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*          Style of line join
 77 LINEJOIN  PIC S9(9) USAGE BINARY.
```

GpiSetLineType - GSLT

```
CALL "GSLT" USING   HPS, LINETYPE.

*          Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*          Line types available
 77 LINETYPE  PIC S9(9) USAGE BINARY.
```

GpiSetLineWidth - GILW

```
CALL "GILW" USING   HPS, LINEWIDTH.

*           Presentation-space handle
 77 HPS        PIC S9(9) USAGE BINARY.
*           Line-width multiplier
 77 LINEWIDTH  PIC S9(9) USAGE BINARY.
```

GpiSetLineWidthGeom - GIGLW

```
CALL "GIGLW" USING   HPS, LINEWIDTH.

*           Presentation-space handle
 77 HPS        PIC S9(9) USAGE BINARY.
*           Geometric line width
 77 LINEWIDTH  PIC S9(9) USAGE BINARY.
```

GpiSetMarker - GSMS

```
CALL "GSMS" USING   HPS, SYMBOL.

*         Presentation-space handle
 77 HPS      PIC S9(9) USAGE BINARY.
*         Marker symbol
 77 SYMBOL   PIC S9(9) USAGE BINARY.
```

GpiSetMarkerBox - GIMB

```
CALL "GIMB" USING   HPS, WIDTH, HEIGHT.

*         Presentation-space handle
 77 HPS      PIC S9(9) USAGE BINARY.
*         Size of marker box
 77 WIDTH    PIC S9(9) USAGE BINARY.
 77 HEIGHT   PIC S9(9) USAGE BINARY.
```

GpiSetMarkerSet - GSMSS

```
CALL "GSMSS" USING   HPS, SET-1.

*        Presentation-space handle
 77 HPS    PIC S9(9) USAGE BINARY.
*        Marker-set local identifier
 77 SET-1  PIC S9(9) USAGE BINARY.
```

GpiSetMetaFileBits - GSMFB

```
CALL "GSMFB" USING   HMF, OFFSET, LENGTH-1, BUFFER.

*          Metafile-memory handle
 77 HMF       PIC S9(9) USAGE BINARY.
*          Offset
 77 OFFSET    PIC S9(9) USAGE BINARY.
*          Length of the metafile data
 77 LENGTH-1  PIC S9(9) USAGE BINARY.
*          Metafile data buffer
 77 BUFFER    PIC X(length-1).
```

GpiSetMix - GSMIX

```
CALL "GSMIX" USING   HPS, MIXMODE.

*          Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*          Mix mode
 77 MIXMODE   PIC S9(9) USAGE BINARY.
```

GpiSetModelTransformMatrix - GISCTM

```
CALL "GISCTM" USING   HPS, COUNT-1, ARRAY, OPTIONS.

*          Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*          Number of elements in matrix
 77 COUNT-1   PIC S9(9) USAGE BINARY.
*          Transformation matrix
 01 ARRAY.
    COPY MATRIXLF.
*          Transform options
 77 OPTIONS   PIC S9(9) USAGE BINARY.
```

GpiSetPageViewport - GIPV

```
CALL "GIPV" USING  HPS, XLEFT, YBOTTOM, XRIGHT, YTOP.

*          Presentation-space handle
 77 HPS       PIC S9(9) USAGE BINARY.
*          Page viewport
 77 XLEFT     PIC S9(9) USAGE BINARY.
 77 YBOTTOM   PIC S9(9) USAGE BINARY.
 77 XRIGHT    PIC S9(9) USAGE BINARY.
 77 YTOP      PIC S9(9) USAGE BINARY.
```

GpiSetPattern - GSPAT

```
CALL "GSPAT" USING   HPS, PATTERNSYMBOL.

*               Presentation-space handle
 77 HPS              PIC S9(9) USAGE BINARY.
*               Pattern symbol
 77 PATTERNSYMBOL    PIC S9(9) USAGE BINARY.
```

GpiSetPatternRefPoint - GIPRP

```
CALL "GIPRP" USING  HPS, X, Y.

*       Presentation-space handle
 77 HPS   PIC S9(9) USAGE BINARY.
*       Pattern reference point
 77 X     PIC S9(9) USAGE BINARY.
 77 Y     PIC S9(9) USAGE BINARY.
```

GpiSetPatternSet - GSPATS

```
       CALL "GSPATS" USING   HPS, SET-1.

    *         Presentation-space handle
     77 HPS     PIC S9(9) USAGE BINARY.
    *         Pattern-set local identifier
     77 SET-1   PIC S9(9) USAGE BINARY.
```

GpiSetPel - GIPEL

```
       CALL "GIPEL" USING  HPS, X, Y.

    *        Presentation-space handle
     77 HPS    PIC S9(9) USAGE BINARY.
    *        Position in world coordinates
     77 X      PIC S9(9) USAGE BINARY.
     77 Y      PIC S9(9) USAGE BINARY.
```

GpiSetPickAperturePosition - GIPAP

```
       CALL "GIPAP" USING  HPS, X, Y.

    *        Presentation-space handle
     77 HPS    PIC S9(9) USAGE BINARY.
    *        Center of the pick aperture
     77 X      PIC S9(9) USAGE BINARY.
     77 Y      PIC S9(9) USAGE BINARY.
```

GpiSetPickApertureSize - GISPAS

```
       CALL "GISPAS" USING   HPS, OPTIONS, WIDTH, HEIGHT.

    *          Presentation-space handle
     77 HPS       PIC S9(9) USAGE BINARY.
    *          Setting option
     77 OPTIONS   PIC S9(9) USAGE BINARY.
    *          Pick aperture size
     77 WIDTH     PIC S9(9) USAGE BINARY.
     77 HEIGHT    PIC S9(9) USAGE BINARY.
```

GpiSetPS - GIPS

```
       CALL "GIPS" USING  HPS, WIDTH, HEIGHT, OPTIONS.

    *          Presentation-space handle
     77 HPS       PIC S9(9) USAGE BINARY.
    *          Presentation-space size
     77 WIDTH     PIC S9(9) USAGE BINARY.
     77 HEIGHT    PIC S9(9) USAGE BINARY.
    *          Options
     77 OPTIONS   PIC S9(9) USAGE BINARY.
```

GpiSetRegion - GIREGN

```
       CALL "GIREGN" USING   HPS, HRGN, COUNT-1, XLEFT-ARRAY, YBOTTOM-ARRAY, XRIGHT-ARRAY,
                             YTOP-ARRAY.

      *          Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *          Region handle
       77 HRGN      PIC S9(9) USAGE BINARY.
      *          Count of rectangles
       77 COUNT-1   PIC S9(9) USAGE BINARY.
      *          Array of rectangles
       01 XLEFT-ARRAY.
          02 XLEFT   PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
       01 YBOTTOM-ARRAY.
          02 YBOTTOM PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
       01 XRIGHT-ARRAY.
          02 XRIGHT  PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
       01 YTOP-ARRAY.
          02 YTOP    PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
```

GpiSetSegmentAttrs - GSSATS

```
       CALL "GSSATS" USING   HPS, SEGID, ATTRIBUTE, VALUE-1.

      *           Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *           Segment identifier
       77 SEGID       PIC S9(9) USAGE BINARY.
      *           Segment attribute
       77 ATTRIBUTE   PIC S9(9) USAGE BINARY.
      *           Attribute value
       77 VALUE-1     PIC S9(9) USAGE BINARY.
```

GpiSetSegmentPriority - GSSPRI

```
       CALL "GSSPRI" USING   HPS, SEGID, REFSEGID, ORDER-1.

      *           Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *           Segment identifier
       77 SEGID      PIC S9(9) USAGE BINARY.
      *           Reference segment identifier
       77 REFSEGID   PIC S9(9) USAGE BINARY.
      *           Segment higher or lower
       77 ORDER-1    PIC S9(9) USAGE BINARY.
```

GpiSetSegmentTransformMatrix - GISTFM

```
       CALL "GISTFM" USING   HPS, SEGID, COUNT-1, ARRAY, OPTIONS.

      *          Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *          Segment identifier
       77 SEGID     PIC S9(9) USAGE BINARY.
      *          Number of elements
       77 COUNT-1   PIC S9(9) USAGE BINARY.
      *          Transformation matrix
       01 ARRAY.
          COPY MATRIXLF.
      *          Transform options
       77 OPTIONS   PIC S9(9) USAGE BINARY.
```

GpiSetStopDraw - GSSDW

```
       CALL "GSSDW" USING    HPS, VALUE-1.

      *          Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *          Stop draw condition
       77 VALUE-1   PIC S9(9) USAGE BINARY.
```

GpiSetTag - GSTAG

```
       CALL "GSTAG" USING    HPS, TAG.

      *        Presentation-space handle
       77 HPS    PIC S9(9) USAGE BINARY.
      *        Tag identifier
       77 TAG    PIC S9(9) USAGE BINARY.
```

GpiSetViewingLimits - GISVL

```
       CALL "GISVL" USING  HPS, XLEFT, YBOTTOM, XRIGHT, YTOP.

      *          Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *          Viewing limits in model space
       77 XLEFT       PIC S9(9) USAGE BINARY.
       77 YBOTTOM     PIC S9(9) USAGE BINARY.
       77 XRIGHT      PIC S9(9) USAGE BINARY.
       77 YTOP        PIC S9(9) USAGE BINARY.
```

GpiSetViewingTransformMatrix - GISVTM

```
       CALL "GISVTM" USING   HPS, COUNT-1, ARRAY, OPTIONS.

      *          Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *          Number of elements
       77 COUNT-1   PIC S9(9) USAGE BINARY.
      *          Transformation matrix
       01 ARRAY.
          COPY MATRIXLF.
      *          Transform option
       77 OPTIONS   PIC S9(9) USAGE BINARY.
```

GpiStrokePath - GSSTRP

```
       CALL "GSSTRP" USING   HPS, PATH, OPTIONS.

      *          Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *          Identifier of path to be stroked; it must be 1
       77 PATH      PIC S9(9) USAGE BINARY.
      *          Stroke option
       77 OPTIONS   PIC S9(9) USAGE BINARY.
```

GpiTranslate - GIXLAT

```
       CALL "GIXLAT" USING   HPS, ARRAY, OPTIONS, X, Y.

      *          Presentation-space handle
       77 HPS       PIC S9(9) USAGE BINARY.
      *          Transform matrix
       01 ARRAY.
          COPY MATRIXLF.
      *          Transform options
       77 OPTIONS   PIC S9(9) USAGE BINARY.
      *          Translation
       77 X         PIC S9(9) USAGE BINARY.
       77 Y         PIC S9(9) USAGE BINARY.
```

GpiUnloadFonts - GSFUL

```
       CALL "GSFUL" USING   HAB, LENGTH-1, STRING-1.

    *          Anchor-block handle
     77 HAB        PIC S9(9) USAGE BINARY.
    *          Fully qualified file name of the font resource
     77 LENGTH-1   PIC S9(9) USAGE BINARY.
     77 STRING-1   PIC X(length-1).
```

GpiUnrealizeColorTable - GSUCT

```
       CALL "GSUCT" USING   HPS.

    *       Presentation-space handle
     77 HPS    PIC S9(9) USAGE BINARY.
```

GpiWCBitBlt - GIWBB

```
       CALL "GIWBB" USING   TARGET, SOURCE-1, COUNT-1, X-ARRAY, Y-ARRAY, ROP, OPTIONS.

    *          Target presentation-space handle
     77 TARGET      PIC S9(9) USAGE BINARY.
    *          Source bit-map handle
     77 SOURCE-1    PIC S9(9) USAGE BINARY.
    *          Point count
     77 COUNT-1     PIC S9(9) USAGE BINARY.
    *          Point array
     01 X-ARRAY.
        02 X        PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
     01 Y-ARRAY.
        02 Y        PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
    *          Mixing function required
     77 ROP         PIC S9(9) USAGE BINARY.
    *          Options
     77 OPTIONS     PIC S9(9) USAGE BINARY.
```

Chapter 5. Picture Function Calls

PicIchg - PICONV

```
      CALL "PICONV" USING   HAB, LENGTH-1, STRING-1, LENGTH-2, STRING-2, TYPE-1, SUCCESS.

*           Anchor-block handle
 77 HAB       PIC S9(9) USAGE BINARY.
*           The name of the source file
 77 LENGTH-1  PIC S9(9) USAGE BINARY.
 77 STRING-1  PIC X(length-1).
*           The name of the destination file
 77 LENGTH-2  PIC S9(9) USAGE BINARY.
 77 STRING-2  PIC X(length-2).
*           Specifies the type of conversion
 77 TYPE-1    PIC S9(9) USAGE BINARY.
*           Success indicator
 77 SUCCESS   PIC S9(9) USAGE BINARY.
```

PicPrint - PIPRT

```
      CALL "PIPRT" USING  HAB, LENGTH-1, STRING-1, TYPE-1, LENGTH-2, STRING-2, SUCCESS.

*           Anchor-block handle
 77 HAB       PIC S9(9) USAGE BINARY.
*           Full path and filename of the source file
 77 LENGTH-1  PIC S9(9) USAGE BINARY.
 77 STRING-1  PIC X(length-1).
*           Type of source file
 77 TYPE-1    PIC S9(9) USAGE BINARY.
*           Spooler parameters
 77 LENGTH-2  PIC S9(9) USAGE BINARY.
 77 STRING-2  PIC X(length-2).
*           Success indicator
 77 SUCCESS   PIC S9(9) USAGE BINARY.
```

Chapter 6. Profile Function Calls

PrfAddProgram - PRADPR

```
CALL "PRADPR" USING    HINI, DETAILS, GROUP-1, PROGRAM-1.

*            Initialization-file handle
 77 HINI         PIC S9(9) USAGE BINARY.
*            Program details for the program to be added to the program list (PROGDETAILS→
HSTRUCT)
 77 DETAILS      PIC S9(9) USAGE BINARY.
*            Handle of the group to which the program is to be added
 77 GROUP-1      PIC S9(9) USAGE BINARY.
*            Program handle for the program added to the program list
 77 PROGRAM-1    PIC S9(9) USAGE BINARY.
```

PrfChangeProgram - PRCPRG

```
CALL "PRCPRG" USING    HINI, PROGRAM-1, DETAILS, SUCCESS.

*            Initialization-file handle
 77 HINI         PIC S9(9) USAGE BINARY.
*            Handle of the program whose information is to be changed
 77 PROGRAM-1    PIC S9(9) USAGE BINARY.
*            Program details (PROGDETAILS→ HSTRUCT)
 77 DETAILS      PIC S9(9) USAGE BINARY.
*            Success indicator
 77 SUCCESS      PIC S9(9) USAGE BINARY.
```

PrfCloseProfile - PRCPR

```
CALL "PRCPR" USING    HINI, SUCCESS.

*          Initialization-file handle
 77 HINI       PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

PrfCreateGroup - PRCGRP

```
CALL "PRCGRP" USING    HINI, LENGTH-1, STRING-1, VISIBILITY, GROUP-1.

*             Initialization-file handle
 77 HINI       PIC S9(9) USAGE BINARY.
*             Title of the new group
 77 LENGTH-1   PIC S9(9) USAGE BINARY.
 77 STRING-1   PIC X(length-1).
*             Visibility control
 77 VISIBILITY PIC S9(9) USAGE BINARY.
*             Group handle for the newly-created group
 77 GROUP-1    PIC S9(9) USAGE BINARY.
```

PrfDestroyGroup - PRDGRP

```
CALL "PRDGRP" USING    HINI, GROUP-1, SUCCESS.

*          Initialization-file handle
 77 HINI       PIC S9(9) USAGE BINARY.
*          Group handle
 77 GROUP-1    PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

PrfOpenProfile - PROPPR

```
CALL "PROPPR" USING    HAB, LENGTH-1, STRING-1, HINI.

*           Anchor-block handle
 77 HAB       PIC S9(9) USAGE BINARY.
*           User-profile file name
 77 LENGTH-1  PIC S9(9) USAGE BINARY.
 77 STRING-1  PIC X(length-1).
*           Initialization-file handle
 77 HINI      PIC S9(9) USAGE BINARY.
```

PrfQueryDefinition - PRQDEF

```
CALL "PRQDEF" USING    HINI, PROGRAM-1, DETAILS, MAXLEN, RETLEN.

*            Initialization-file handle
 77 HINI        PIC S9(9) USAGE BINARY.
*            Handle of the program whose details are to be returned
 77 PROGRAM-1   PIC S9(9) USAGE BINARY.
*            Program details (PROGDETAILS→ HSTRUCT)
 77 DETAILS     PIC S9(9) USAGE BINARY.
*            Maximum length in bytes
 77 MAXLEN      PIC S9(9) USAGE BINARY.
*            Length of returned data
 77 RETLEN      PIC S9(9) USAGE BINARY.
```

PrfQueryProfile - PRQPR

```
CALL "PRQPR" USING    HAB, PROFILE, SUCCESS.

*          Anchor-block handle
 77 HAB       PIC S9(9) USAGE BINARY.
*          Profile names structure (PRFPROFILE→ HSTRUCT)
 77 PROFILE   PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS   PIC S9(9) USAGE BINARY.
```

PrfQueryProfileData - PRQPDA

```
CALL "PRQPDA" USING    HINI, LENGTH-1, STRING-1, LENGTH-2, STRING-2, VALUE-1, SIZE-1,
                       SUCCESS.

*           Initialization-file handle
 77 HINI       PIC S9(9) USAGE BINARY.
*           Application name
 77 LENGTH-1   PIC S9(9) USAGE BINARY.
 77 STRING-1   PIC X(length-1).
*           Key name
 77 LENGTH-2   PIC S9(9) USAGE BINARY.
 77 STRING-2   PIC X(length-2).
*           Value data (STORAGE→ HSTRUCT)
 77 VALUE-1    PIC S9(9) USAGE BINARY.
*           Size of value data
 77 SIZE-1     PIC S9(9) USAGE BINARY.
*           Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

PrfQueryProfileInt - PRQPIN

```
CALL "PRQPIN" USING   HINI, LENGTH-1, STRING-1, LENGTH-2, STRING-2, DEFAULT, RESULT.

*           Initialization-file handle
 77 HINI       PIC S9(9) USAGE BINARY.
*           Application name
 77 LENGTH-1   PIC S9(9) USAGE BINARY.
 77 STRING-1   PIC X(length-1).
*           Key name
 77 LENGTH-2   PIC S9(9) USAGE BINARY.
 77 STRING-2   PIC X(length-2).
*           Default value
 77 DEFAULT    PIC S9(9) USAGE BINARY.
*           Key value specified in the intialization file
 77 RESULT     PIC S9(9) USAGE BINARY.
```

PrfQueryProfileSize - PRQPSZ

```
CALL "PRQPSZ" USING   HINI, LENGTH-1, STRING-1, LENGTH-2, STRING-2, DATALEN, SUCCESS.

*           Initialization-file handle
 77 HINI       PIC S9(9) USAGE BINARY.
*           Application name
 77 LENGTH-1   PIC S9(9) USAGE BINARY.
 77 STRING-1   PIC X(length-1).
*           Key name
 77 LENGTH-2   PIC S9(9) USAGE BINARY.
 77 STRING-2   PIC X(length-2).
*           Data length
 77 DATALEN    PIC S9(9) USAGE BINARY.
*           Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

PrfQueryProfileString - PRQPST

```
CALL "PRQPST" USING   HINI, LENGTH-1, STRING-1, LENGTH-2, STRING-2, LENGTH-3, STRING-3,
                      PROFILESTRING, MAXLEN, RETLEN.

*              Initialization-file handle
 77 HINI          PIC S9(9) USAGE BINARY.
*              Application name
 77 LENGTH-1      PIC S9(9) USAGE BINARY.
 77 STRING-1      PIC X(length-1).
*              Key name
 77 LENGTH-2      PIC S9(9) USAGE BINARY.
 77 STRING-2      PIC X(length-2).
*              Default string
 77 LENGTH-3      PIC S9(9) USAGE BINARY.
 77 STRING-3      PIC X(length-3).
*              Profile string (STORAGE→ HSTRUCT)
 77 PROFILESTRING PIC S9(9) USAGE BINARY.
*              Maximum string length
 77 MAXLEN        PIC S9(9) USAGE BINARY.
*              String length returned
 77 RETLEN        PIC S9(9) USAGE BINARY.
```

PrfQueryProgramCategory - PRQPC

```
CALL "PRQPC" USING   HINI, LENGTH-1, STRING-1, CATEGORY.

*           Initialization-file handle
 77 HINI       PIC S9(9) USAGE BINARY.
*           Executable-file name
 77 LENGTH-1   PIC S9(9) USAGE BINARY.
 77 STRING-1   PIC X(length-1).
*           Program category
 77 CATEGORY   PIC S9(9) USAGE BINARY.
```

PrfQueryProgramHandle - PRQPHD

```
       CALL "PRQPHD" USING    HINI, LENGTH-1, STRING-1, PROGARRAY, MAXLEN, COUNT-1, RETLEN.

      *            Initialization-file handle
       77 HINI          PIC S9(9) USAGE BINARY.
      *            Executable-file name
       77 LENGTH-1      PIC S9(9) USAGE BINARY.
       77 STRING-1      PIC X(length-1).
      *            Program handles
       01 PROGARRAY.
          COPY HPROGA REPLACING HPROGA-DIM BY n.
      *            Maximum number of program handles
       77 MAXLEN        PIC S9(9) USAGE BINARY.
      *            Number of program handles returned
       77 COUNT-1       PIC S9(9) USAGE BINARY.
      *            Number of bytes returned
       77 RETLEN        PIC S9(9) USAGE BINARY.
```

PrfQueryProgramTitles - PRQPTI

```
       CALL "PRQPTI" USING   HINI, GROUP-1, TITLES-ARRAY, MAXLEN, COUNT-1, RETLEN.

      *          Initialization-file handle
       77 HINI       PIC S9(9) USAGE BINARY.
      *          Handle of the program or group whose information is to be returned
       77 GROUP-1    PIC S9(9) USAGE BINARY.
      *          Program information buffer (PROGTITLE→ HSTRUCT)
       01 TITLES-ARRAY.
          02 TITLES  PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
      *          Buffer length
       77 MAXLEN     PIC S9(9) USAGE BINARY.
      *          Number of structures returned
       77 COUNT-1    PIC S9(9) USAGE BINARY.
      *          Length returned
       77 RETLEN     PIC S9(9) USAGE BINARY.
```

PrfRemoveProgram - PRRPRG

```
       CALL "PRRPRG" USING    HINI, PROGRAM-1, SUCCESS.

      *            Initialization-file handle
       77 HINI          PIC S9(9) USAGE BINARY.
      *            Program handle
       77 PROGRAM-1     PIC S9(9) USAGE BINARY.
      *            Success indicator
       77 SUCCESS       PIC S9(9) USAGE BINARY.
```

PrfReset - PRRES

```
       CALL "PRRES" USING   HAB, PROFILE, SUCCESS.

      *          Anchor-block handle
       77 HAB       PIC S9(9) USAGE BINARY.
      *          Profile-names structure (PRFPROFILE→ HSTRUCT)
       77 PROFILE   PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

PrfWriteProfileData - PRWPDA

```
      CALL "PRWPDA" USING    HINI, LENGTH-1, STRING-1, LENGTH-2, STRING-2, VALUE-1, SIZE-1,
                             SUCCESS.

*           Initialization-file handle
 77 HINI       PIC S9(9) USAGE BINARY.
*           Application name
 77 LENGTH-1   PIC S9(9) USAGE BINARY.
 77 STRING-1   PIC X(length-1).
*           Key name
 77 LENGTH-2   PIC S9(9) USAGE BINARY.
 77 STRING-2   PIC X(length-2).
*           Value data (STORAGE→ HSTRUCT)
 77 VALUE-1    PIC S9(9) USAGE BINARY.
*           Size of value data
 77 SIZE-1     PIC S9(9) USAGE BINARY.
*           Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

PrfWriteProfileString - PRWPST

```
      CALL "PRWPST" USING    HINI, LENGTH-1, STRING-1, LENGTH-2, STRING-2, LENGTH-3, STRING-3,
                             SUCCESS.

*           Initialization-file handle
 77 HINI       PIC S9(9) USAGE BINARY.
*           Application name
 77 LENGTH-1   PIC S9(9) USAGE BINARY.
 77 STRING-1   PIC X(length-1).
*           Key name
 77 LENGTH-2   PIC S9(9) USAGE BINARY.
 77 STRING-2   PIC X(length-2).
*           Text string
 77 LENGTH-3   PIC S9(9) USAGE BINARY.
 77 STRING-3   PIC X(length-3).
*           Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

Chapter 7. Spooler Function Calls

SplQmAbort - SMABT

```
       CALL "SMABT" USING    HSPL, SUCCESS.

    *          Spooler handle
     77 HSPL       PIC S9(9) USAGE BINARY.
    *          Success indicator
     77 SUCCESS    PIC S9(9) USAGE BINARY.
```

SplQmClose - SMCLS

```
       CALL "SMCLS" USING    HSPL, SUCCESS.

    *          Spooler handle
     77 HSPL       PIC S9(9) USAGE BINARY.
    *          Success indicator
     77 SUCCESS    PIC S9(9) USAGE BINARY.
```

SplQmEndDoc - SMEDOC

```
       CALL "SMEDOC" USING    HSPL, JOB.

    *        Spooler handle
     77 HSPL    PIC S9(9) USAGE BINARY.
    *        Job identifier
     77 JOB     PIC S9(9) USAGE BINARY.
```

SplQmOpen - SMOPEN

```
       CALL "SMOPEN" USING    LENGTH-1, STRING-1, COUNT-1, DATA-1, HSPL.

    *           A token (nickname) that identifies spooler information
     77 LENGTH-1    PIC S9(9) USAGE BINARY.
     77 STRING-1    PIC X(length-1).
    *           Number of items
     77 COUNT-1     PIC S9(9) USAGE BINARY.
    *           Open parameters
     01 DATA-1.
        COPY DEVSTRUC.
    *           Spooler handle
     77 HSPL        PIC S9(9) USAGE BINARY.
```

SplQmStartDoc - SMSDOC

```
       CALL "SMSDOC" USING    HSPL, LENGTH-1, STRING-1, SUCCESS.

    *           Spooler handle
     77 HSPL        PIC S9(9) USAGE BINARY.
    *           Document name
     77 LENGTH-1    PIC S9(9) USAGE BINARY.
     77 STRING-1    PIC X(length-1).
    *           Success indicator
     77 SUCCESS     PIC S9(9) USAGE BINARY.
```

SplQmWrite - SMWRT

```
CALL "SMWRT" USING    HSPL, COUNT-1, DATA-1, SUCCESS.

*          Spooler handle
 77 HSPL      PIC S9(9) USAGE BINARY.
*          Length in bytes
 77 COUNT-1   PIC S9(9) USAGE BINARY.
*          Buffer of data to be written to the spool file
 77 DATA-1    PIC X(count-1).
*          Success indicator
 77 SUCCESS   PIC S9(9) USAGE BINARY.
```

SplQpInstall - SPINST

```
CALL "SPINST" USING  HWND, SUCCESS.

*          Window handle
 77 HWND       PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

SplQpQueryDt - SPQDT

```
CALL "SPQDT" USING   COUNT-1, DATATYPES-ARRAY, SUCCESS.

*           Maximum number of data types that can be returned
 77 COUNT-1      PIC S9(9) USAGE BINARY.
*           An array containing the data types supported (STRL→ HSTRUCT)
 01 DATATYPES-ARRAY.
    02 DATATYPES  PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
*           Success indicator
 77 SUCCESS      PIC S9(9) USAGE BINARY.
```

Chapter 8. Window Function Calls

WinAddAtom - WUADAT

```
       CALL "WUADAT" USING    ATOMTBL, LENGTH-1, STRING-1, ATOM.

    *          Atom-table handle
     77 ATOMTBL     PIC S9(9) USAGE BINARY.
    *          Atom name
     77 LENGTH-1    PIC S9(9) USAGE BINARY.
     77 STRING-1    PIC X(length-1).
    *          Atom value
     77 ATOM        PIC S9(9) USAGE BINARY.
```

WinAddProgram - WMADPR

```
       CALL "WMADPR" USING    HAB, PROGRAMINFO, GROUPHANDLE, PROGHANDLE.

    *             Anchor-block handle
     77 HAB            PIC S9(9) USAGE BINARY.
    *             Program information for the program to be added to the installed program
    list (PIBSTRUCT→ HSTRUCT)
     77 PROGRAMINFO     PIC S9(9) USAGE BINARY.
    *             Handle of the program group to which the program is to be added
     77 GROUPHANDLE     PIC S9(9) USAGE BINARY.
    *             Program handle for the program added to the installed program list
     77 PROGHANDLE      PIC S9(9) USAGE BINARY.
```

WinAddSwitchEntry - WMASWE

```
       CALL "WMASWE" USING    SWITCHDATA, SWITCH.

    *             Switch data
     01 SWITCHDATA.
        COPY SWCNTRL.
    *             Handle to the newly-created switch list entry
     77 SWITCH         PIC S9(9) USAGE BINARY.
```

WinAlarm - WMALRM

```
       CALL "WMALRM" USING    DESKTOP, STYLE, RESULT.

    *          Desktop-window handle
     77 DESKTOP    PIC S9(9) USAGE BINARY.
    *          Alarm style
     77 STYLE      PIC S9(9) USAGE BINARY.
    *          Alarm-generated indicator
     77 RESULT     PIC S9(9) USAGE BINARY.
```

WinBeginEnumWindows - WIBEWN

```
       CALL "WIBEWN" USING   PARENT, HENUM.

    *         Handle of the window whose child windows are to be enumerated
     77 PARENT    PIC S9(9) USAGE BINARY.
    *         Enumeration handle
     77 HENUM     PIC S9(9) USAGE BINARY.
```

WinBeginPaint - WIBPNT

```
       CALL "WIBPNT" USING   HWND, HPS, XLEFT, YBOTTOM, XRIGHT, YTOP, PAINTPS.

      *          Handle of window where drawing is going to occur
       77 HWND       PIC S9(9) USAGE BINARY.
      *          Presentation-space handle
       77 HPS        PIC S9(9) USAGE BINARY.
      *          Bounding rectangle
       77 XLEFT      PIC S9(9) USAGE BINARY.
       77 YBOTTOM    PIC S9(9) USAGE BINARY.
       77 XRIGHT     PIC S9(9) USAGE BINARY.
       77 YTOP       PIC S9(9) USAGE BINARY.
      *          Presentation-space handle
       77 PAINTPS    PIC S9(9) USAGE BINARY.
```

WinBroadcastMsg - WMBRMG

```
       CALL "WMBRMG" USING     PARENT, MSGID, PARAM1, PARAM2, CMD, SUCCESS.

      *          Parent-window handle
       77 PARENT    PIC S9(9) USAGE BINARY.
      *          Message identifier
       77 MSGID     PIC S9(9) USAGE BINARY.
      *          Parameter 1 (MPARAM: Can also be HSTRUCT or COMPOSED)
       77 PARAM1    PIC S9(9) USAGE BINARY.
      *          Parameter 2 (MPARAM: Can also be HSTRUCT or COMPOSED)
       77 PARAM2    PIC S9(9) USAGE BINARY.
      *          Broadcast message command
       77 CMD       PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinCalcFrameRect - WICRCT

```
       CALL "WICRCT" USING   HWND, XLEFT, YBOTTOM, XRIGHT, YTOP, FRAME, SUCCESS.

      *          Frame-window handle
       77 HWND       PIC S9(9) USAGE BINARY.
      *          Window rectangle
       77 XLEFT      PIC S9(9) USAGE BINARY.
       77 YBOTTOM    PIC S9(9) USAGE BINARY.
       77 XRIGHT     PIC S9(9) USAGE BINARY.
       77 YTOP       PIC S9(9) USAGE BINARY.
      *          Frame indicator
       77 FRAME      PIC S9(9) USAGE BINARY.
      *          Rectangle-calculated indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinCallMsgFilter - WMCMFI

```
       CALL "WMCMFI" USING    HAB, PQMSG, FILTER, HOOKRET.

      *          Anchor-block handle
       77 HAB       PIC S9(9) USAGE BINARY.
      *          Message to be passed to the message-filter hook
       01 PQMSG.
          COPY QMSG.
      *          Filter
       77 FILTER    PIC S9(9) USAGE BINARY.
      *          Message-filter hook return indicator
       77 HOOKRET   PIC S9(9) USAGE BINARY.
```

WinCancelShutdown - WMCSD

```
       CALL "WMCSD" USING    HMQ, CANCELALWAYS, SUCCESS.

    *              Queue handle
     77 HMQ             PIC S9(9) USAGE BINARY.
    *              Cancellation control
     77 CANCELALWAYS     PIC S9(9) USAGE BINARY.
    *              Success indicator
     77 SUCCESS          PIC S9(9) USAGE BINARY.
```

WinChangeSwitchEntry - WMCSWE

```
       CALL "WMCSWE" USING     SWITCH, SWITCHDATA, RETCODE.

    *            Handle to the switch-list entry to be changed
     77 SWITCH       PIC S9(9) USAGE BINARY.
    *            Switch-control data
     01 SWITCHDATA.
        COPY SWCNTRL.
    *            Return code
     77 RETCODE      PIC S9(9) USAGE BINARY.
```

WinCloseClipbrd - WICCBD

```
       CALL "WICCBD" USING    HAB, SUCCESS.

    *         Anchor-block handle
     77 HAB       PIC S9(9) USAGE BINARY.
    *         Success indicator
     77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinCompareStrings - WUCOMP

```
       CALL "WUCOMP" USING     HAB, CODEPAGE, COUNTRYCODE, LENGTH-1, STRING-1, LENGTH-2,
                               STRING-2, OPTIONS, RESULT.

    *              Anchor-block handle
     77 HAB              PIC S9(9) USAGE BINARY.
    *              Codepage identity of both strings
     77 CODEPAGE         PIC S9(9) USAGE BINARY.
    *              Country code
     77 COUNTRYCODE      PIC S9(9) USAGE BINARY.
    *              String 1
     77 LENGTH-1         PIC S9(9) USAGE BINARY.
     77 STRING-1         PIC X(length-1).
    *              String 2
     77 LENGTH-2         PIC S9(9) USAGE BINARY.
     77 STRING-2         PIC X(length-2).
    *              Reserved
     77 OPTIONS          PIC S9(9) USAGE BINARY.
    *              Comparison result
     77 RESULT           PIC S9(9) USAGE BINARY.
```

WinCopyAccelTable - WMCAT

```
       CALL "WMCAT" USING    HACCEL, ACCELTABLE, COPYMAX, COPIED.

    *            Accelerator-table handle
     77 HACCEL       PIC S9(9) USAGE BINARY.
    *            Accelerator-table data area
     01 ACCELTABLE.
        COPY ACCELTAB REPLACING ACCELTAB-DIM BY n.
    *            Maximum data area size
     77 COPYMAX      PIC S9(9) USAGE BINARY.
    *            Amount copied or size required
     77 COPIED       PIC S9(9) USAGE BINARY.
```

WinCopyRect - WICR

```
       CALL "WICR" USING   HAB, XLEFT, YBOTTOM, XRIGHT, YTOP, XLEFT-2, YBOTTOM-2, XRIGHT-2,
                           YTOP-2, SUCCESS.

      *            Anchor-block handle
       77 HAB          PIC S9(9) USAGE BINARY.
      *            Destination rectangle
       77 XLEFT        PIC S9(9) USAGE BINARY.
       77 YBOTTOM      PIC S9(9) USAGE BINARY.
       77 XRIGHT       PIC S9(9) USAGE BINARY.
       77 YTOP         PIC S9(9) USAGE BINARY.
      *            Source rectangle
       77 XLEFT-2      PIC S9(9) USAGE BINARY.
       77 YBOTTOM-2    PIC S9(9) USAGE BINARY.
       77 XRIGHT-2     PIC S9(9) USAGE BINARY.
       77 YTOP-2       PIC S9(9) USAGE BINARY.
      *            Success indicator
       77 SUCCESS      PIC S9(9) USAGE BINARY.
```

WinCpTranslateChar - WUTRCH

```
       CALL "WUTRCH" USING    HAB, CPSOURCE, SOURCE-1, CPDEST, DEST.

      *            Anchor-block handle
       77 HAB          PIC S9(9) USAGE BINARY.
      *            Source-character code page
       77 CPSOURCE     PIC S9(9) USAGE BINARY.
      *            Character to be translated
       77 SOURCE-1     PIC S9(9) USAGE BINARY.
      *            Code page of the resultant character
       77 CPDEST       PIC S9(9) USAGE BINARY.
      *            If nonzero, the translated character
       77 DEST         PIC S9(9) USAGE BINARY.
```

WinCpTranslateString - WUTRST

```
       CALL "WUTRST" USING    HAB, CPSOURCE, LENGTH-1, STRING-1, CPDEST, LENDEST, LENGTH-2,
                              STRING-2, SUCCESS.

      *            Anchor-block handle
       77 HAB          PIC S9(9) USAGE BINARY.
      *            Source-string code page
       77 CPSOURCE     PIC S9(9) USAGE BINARY.
      *            String to be translated
       77 LENGTH-1     PIC S9(9) USAGE BINARY.
       77 STRING-1     PIC X(length-1).
      *            Code page of the resultant string
       77 CPDEST       PIC S9(9) USAGE BINARY.
      *            Maximum length of output string
       77 LENDEST      PIC S9(9) USAGE BINARY.
      *            The translated string ( LENGTH-2 is result string length)
       77 LENGTH-2     PIC S9(9) USAGE BINARY.
       77 STRING-2     PIC X(lendest).
      *            Success indicator
       77 SUCCESS      PIC S9(9) USAGE BINARY.
```

WinCreateAccelTable - WMCACT

```
       CALL "WMCACT" USING    HAB, ACCELTABLE, HACCEL.

      *             Anchor-block handle
       77 HAB           PIC S9(9) USAGE BINARY.
      *             Accelerator table
       01 ACCELTABLE.
          COPY ACCELTAB REPLACING ACCELTAB-DIM BY n.
      *             Accelerator-table handle
       77 HACCEL        PIC S9(9) USAGE BINARY.
```

WinCreateAtomTable - WMCATT

```
      CALL "WMCATT" USING    INITIAL-1, BUCKETS, ATOMTBL.

*             Initial bytes
 77 INITIAL-1  PIC S9(9) USAGE BINARY.
*             Size of the hash table
 77 BUCKETS    PIC S9(9) USAGE BINARY.
*             Atom-table handle
 77 ATOMTBL    PIC S9(9) USAGE BINARY.
```

WinCreateCursor - WMCCUR

```
      CALL "WMCCUR" USING     HWND, X, Y, CX, CY, RGF, XLEFT, YBOTTOM, XRIGHT, YTOP, SUCCESS.

*          Handle of window in which cursor is displayed
 77 HWND       PIC S9(9) USAGE BINARY.
*          x position of cursor
 77 X          PIC S9(9) USAGE BINARY.
*          y position of cursor
 77 Y          PIC S9(9) USAGE BINARY.
*          x size of cursor
 77 CX         PIC S9(9) USAGE BINARY.
*          y size of cursor
 77 CY         PIC S9(9) USAGE BINARY.
*          Controls the appearance of the cursor
 77 RGF        PIC S9(9) USAGE BINARY.
*          Cursor rectangle
 77 XLEFT      PIC S9(9) USAGE BINARY.
 77 YBOTTOM    PIC S9(9) USAGE BINARY.
 77 XRIGHT     PIC S9(9) USAGE BINARY.
 77 YTOP       PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinCreateDataStructure - WUCDS

```
      CALL "WUCDS" USING    HAB, COUNT-1, TYPES-ARRAY, INLEN, INSTRUC, MAXLEN, HANDLE, SUCCESS.

*          Anchor-block handle
 77 HAB       PIC S9(9) USAGE BINARY.
*          Number of elements
 77 COUNT-1   PIC S9(9) USAGE BINARY.
*          Data type codes
 01 TYPES-ARRAY.
    02 TYPES  PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
*          Length of input structure
 77 INLEN     PIC S9(9) USAGE BINARY.
*          Input structure
 77 INSTRUC   PIC X(inlen).
*          Maximum length of structure
 77 MAXLEN    PIC S9(9) USAGE BINARY.
*          Handle of data structure created
 77 HANDLE    PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinCreateDlg - WCCRD

```
       CALL "WCCRD" USING    PARENT, OWNER, DLGPROC, DLGTMP, CREATEPARAMS, DLG.

      *                Parent-window handle of the created dialog window
       77 PARENT            PIC S9(9) USAGE BINARY.
      *                Requested owner-window handle of the created dialog window
       77 OWNER             PIC S9(9) USAGE BINARY.
      *                Dialog procedure for the created dialog window
       77 DLGPROC           PIC S9(9) USAGE BINARY.
      *                Dialog template
       01 DLGTMP.
          COPY DLGT.
      *                Application-defined data area (CREATEPARAMS→ HSTRUCT)
       77 CREATEPARAMS      PIC S9(9) USAGE BINARY.
      *                Dialog-window handle
       77 DLG               PIC S9(9) USAGE BINARY.
```

WinCreateFrameControls - WIFRCO

```
       CALL "WIFRCO" USING    FRAME, FCDATA, LENGTH-1, STRING-1, SUCCESS.

      *           Frame-window handle
       77 FRAME       PIC S9(9) USAGE BINARY.
      *           Frame-control data
       01 FCDATA.
          COPY FRACDATA.
      *           Title string
       77 LENGTH-1    PIC S9(9) USAGE BINARY.
       77 STRING-1    PIC X(length-1).
      *           Success indicator
       77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinCreateGroup - WMCGRP

```
       CALL "WMCGRP" USING     HAB, LENGTH-1, STRING-1, VISIBILITY, RES1, RES2, GROUPHANDLE.

      *              Anchor-block handle
       77 HAB               PIC S9(9) USAGE BINARY.
      *              Title of the new group
       77 LENGTH-1          PIC S9(9) USAGE BINARY.
       77 STRING-1          PIC X(length-1).
      *              Visibility control
       77 VISIBILITY        PIC S9(9) USAGE BINARY.
      *              Reserved
       77 RES1              PIC S9(9) USAGE BINARY.
      *              Reserved
       77 RES2              PIC S9(9) USAGE BINARY.
      *              Program-group handle for the newly-created group
       77 GROUPHANDLE       PIC S9(9) USAGE BINARY.
```

WinCreateMsgQueue - WMCMQ

```
       CALL "WMCMQ" USING     HAB, QUEUESIZE, HMQ.

      *            Anchor-block handle
       77 HAB          PIC S9(9) USAGE BINARY.
      *            Maximum queue size
       77 QUEUESIZE    PIC S9(9) USAGE BINARY.
      *            Message-queue handle
       77 HMQ          PIC S9(9) USAGE BINARY.
```

WinCreatePointer - WICPOI

```
      CALL "WICPOI" USING  DESKTOP, BITMAP, POINTERSIZE, XHOTSPOT, YHOTSPOT, HPTR.

*             Desktop-window handle or HWND_DESKTOP
 77 DESKTOP      PIC S9(9) USAGE BINARY.
*             Bit-map handle from which the pointer image is created
 77 BITMAP       PIC S9(9) USAGE BINARY.
*             Pointer-size indicator
 77 POINTERSIZE  PIC S9(9) USAGE BINARY.
*             x offset of hotspot within pointer from its lower left corner (in pels)
 77 XHOTSPOT     PIC S9(9) USAGE BINARY.
*             y offset of hotspot within pointer from its lower left corner (in pels)
 77 YHOTSPOT     PIC S9(9) USAGE BINARY.
*             Pointer handle
 77 HPTR         PIC S9(9) USAGE BINARY.
```

WinCreatePointerIndirect - WICPIN

```
      CALL "WICPIN" USING  DESKTOP, POINTERINFO, HPTR.

*             Desktop-window handle or HWND_DESKTOP
 77 DESKTOP      PIC S9(9) USAGE BINARY.
*             Pointer information structure
 01 POINTERINFO.
    COPY PTRINF.
*             Pointer handle
 77 HPTR         PIC S9(9) USAGE BINARY.
```

WinCreateStdWindow - WICRTS

```
      CALL "WICRTS" USING   PARENT, STYLE, CREATEFLAGS, LENGTH-1, STRING-1, LENGTH-2,
                            STRING-2, STYLECLIENT, RESOURCE, ID-1, CLIENT, FRAME.

*             Parent-window handle
 77 PARENT       PIC S9(9) USAGE BINARY.
*             Frame-window style
 77 STYLE        PIC S9(9) USAGE BINARY.
*             Frame-creation flags
 77 CREATEFLAGS  PIC S9(9) USAGE BINARY.
*             Client-window class name
 77 LENGTH-1     PIC S9(9) USAGE BINARY.
 77 STRING-1     PIC X(length-1).
*             Title-bar text
 77 LENGTH-2     PIC S9(9) USAGE BINARY.
 77 STRING-2     PIC X(length-2).
*             Client-window style
 77 STYLECLIENT  PIC S9(9) USAGE BINARY.
*             Resource identifier
 77 RESOURCE     PIC S9(9) USAGE BINARY.
*             Frame-window identifier
 77 ID-1         PIC S9(9) USAGE BINARY.
*             Client-window handle
 77 CLIENT       PIC S9(9) USAGE BINARY.
*             Frame-window handle
 77 FRAME        PIC S9(9) USAGE BINARY.
```

WinCreateSwitchEntry - WMCRSE

```
      CALL "WMCRSE" USING    HAB, SWITCHDATA, SWITCH.

*            Anchor-block handle
 77 HAB          PIC S9(9) USAGE BINARY.
*            Switch data
 01 SWITCHDATA.
    COPY SWCNTRL.
*            Handle to the newly-created switch list entry
 77 SWITCH       PIC S9(9) USAGE BINARY.
```

WinCreateWindow - WICRT

```
CALL "WICRT" USING   PARENT, LENGTH-1, STRING-1, LENGTH-2, STRING-2, STYLE, XCOORD,
                     YCOORD, WIDTH, HEIGHT, OWNER, BEHIND, ID-1, CTLDATA, PRESPARAMS,
                     HWND.

*            Parent-window handle
 77 PARENT       PIC S9(9) USAGE BINARY.
*            Registered-class name
 77 LENGTH-1     PIC S9(9) USAGE BINARY.
 77 STRING-1     PIC X(length-1).
*            Window text
 77 LENGTH-2     PIC S9(9) USAGE BINARY.
 77 STRING-2     PIC X(length-2).
*            Window style
 77 STYLE        PIC S9(9) USAGE BINARY.
*            x coordinate of window position
 77 XCOORD       PIC S9(9) USAGE BINARY.
*            y coordinate of window position
 77 YCOORD       PIC S9(9) USAGE BINARY.
*            Width of window, in window coordinates
 77 WIDTH        PIC S9(9) USAGE BINARY.
*            Height of window, in window coordinates
 77 HEIGHT       PIC S9(9) USAGE BINARY.
*            Owner-window handle
 77 OWNER        PIC S9(9) USAGE BINARY.
*            Sibling-window handle
 77 BEHIND       PIC S9(9) USAGE BINARY.
*            Window identifier
 77 ID-1         PIC S9(9) USAGE BINARY.
*            Control data (CTLDATA→ HSTRUCT)
 77 CTLDATA      PIC S9(9) USAGE BINARY.
*            Presentation parameters (PRESDATA→ HSTRUCT)
 77 PRESPARAMS   PIC S9(9) USAGE BINARY.
*            Window handle
 77 HWND         PIC S9(9) USAGE BINARY.
```

WinDefDlgProc - WCDDP

```
CALL "WCDDP" USING   DLG, MSGID, PARAM1, PARAM2, REPLY.

*         Dialog-window handle
 77 DLG      PIC S9(9) USAGE BINARY.
*         Message identity
 77 MSGID    PIC S9(9) USAGE BINARY.
*         Parameter 1 (MPARAM: Can also be HSTRUCT or COMPOSED)
 77 PARAM1   PIC S9(9) USAGE BINARY.
*         Parameter 2 (MPARAM: Can also be HSTRUCT or COMPOSED)
 77 PARAM2   PIC S9(9) USAGE BINARY.
*         Message-return data (MRESULT: Can also be HSTRUCT or COMPOSED)
 77 REPLY    PIC S9(9) USAGE BINARY.
```

WinDefWindowProc - WMDWP

```
CALL "WMDWP" USING   HWND, MSGID, PARAM1, PARAM2, REPLY.

*         Window handle
 77 HWND     PIC S9(9) USAGE BINARY.
*         Message identity
 77 MSGID    PIC S9(9) USAGE BINARY.
*         Parameter 1 (MPARAM: Can also be HSTRUCT or COMPOSED)
 77 PARAM1   PIC S9(9) USAGE BINARY.
*         Parameter 2 (MPARAM: Can also be HSTRUCT or COMPOSED)
 77 PARAM2   PIC S9(9) USAGE BINARY.
*         Message-return data (MRESULT: Can also be HSTRUCT or COMPOSED)
 77 REPLY    PIC S9(9) USAGE BINARY.
```

WinDeleteAtom - WMDELA

```
CALL "WMDELA" USING    ATOMTBL, ATOM, RETURNCODE.

*            Atom-table handle
 77 ATOMTBL        PIC S9(9) USAGE BINARY.
*            Atom identifying the atom to be deleted
 77 ATOM           PIC S9(9) USAGE BINARY.
*            Return code
 77 RETURNCODE     PIC S9(9) USAGE BINARY.
```

WinDeleteLibrary - WMDLIB

```
CALL "WMDLIB" USING    HAB, LIBHANDLE, DELETED.

*           Anchor-block handle
 77 HAB          PIC S9(9) USAGE BINARY.
*           Library handle to be deleted
 77 LIBHANDLE    PIC S9(9) USAGE BINARY.
*           Library-deleted indicator
 77 DELETED      PIC S9(9) USAGE BINARY.
```

WinDeleteProcedure - WMDPR

```
CALL "WMDPR" USING    HAB, WNDPROC, SUCCESS.

*          Anchor-block handle
 77 HAB         PIC S9(9) USAGE BINARY.
*          Window procedure identifier to be deleted
 77 WNDPROC     PIC S9(9) USAGE BINARY.
*          Procedure-deleted indicator
 77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinDestroyAccelTable - WMDACT

```
CALL "WMDACT" USING    ACCEL, SUCCESS.

*          Accelerator-table handle
 77 ACCEL      PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinDestroyAtomTable - WMDATT

```
CALL "WMDATT" USING    ATOMTBL, RETURNCODE.

*            Atom-table handle
 77 ATOMTBL        PIC S9(9) USAGE BINARY.
*            Return code
 77 RETURNCODE     PIC S9(9) USAGE BINARY.
```

WinDestroyCursor - WMDCUR

```
CALL "WMDCUR" USING    HWND, SUCCESS.

*          Window handle to which the cursor belongs
 77 HWND       PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinDestroyDataStructure - WUDDS

```
CALL "WUDDS" USING    HAB, HANDLE, SUCCESS.

*          Anchor-block handle
 77 HAB        PIC S9(9) USAGE BINARY.
*          Data structure handle
 77 HANDLE     PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinDestroyMsgQueue - WMDMQ

```
CALL "WMDMQ" USING     HMQ, DESTROYED.

*            Message-queue handle
 77 HMQ          PIC S9(9) USAGE BINARY.
*            Queue-destroyed indicator
 77 DESTROYED    PIC S9(9) USAGE BINARY.
```

WinDestroyPointer - WMDPOI

```
CALL "WMDPOI" USING    POINTER-1, SUCCESS.

*             Handle of pointer to be destroyed
 77 POINTER-1    PIC S9(9) USAGE BINARY.
*             Success indicator
 77 SUCCESS      PIC S9(9) USAGE BINARY.
```

WinDestroyWindow - WIDEL

```
CALL "WIDEL" USING   HWND, SUCCESS.

*          Window handle
 77 HWND       PIC S9(9) USAGE BINARY.
*          Window-destroyed indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinDismissDlg - WCDELD

```
CALL "WCDELD" USING    DLG, RESULT, SUCCESS.

*          Dialog-window handle
 77 DLG        PIC S9(9) USAGE BINARY.
*          Reply value
 77 RESULT     PIC S9(9) USAGE BINARY.
*          Dialog-dismissed indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinDispatchMsg - WMDISP

```
CALL "WMDISP" USING    HAB, MSG, REPLY.

*        Anchor-block handle
 77 HAB     PIC S9(9) USAGE BINARY.
*        Message structure
 01 MSG.
    COPY QMSG.
*        Message-return data (MRESULT: Can also be HSTRUCT or COMPOSED)
 77 REPLY   PIC S9(9) USAGE BINARY.
```

WinDlgBox - WCLMD

```
CALL "WCLMD" USING    PARENT, OWNER, DLGPROC, RESOURCE, DLGID, CREATEPARAMS, RESULT.

*               Parent-window handle of the created dialog window
 77 PARENT           PIC S9(9) USAGE BINARY.
*               Requested owner-window handle of the created dialog window
 77 OWNER            PIC S9(9) USAGE BINARY.
*               Dialog procedure for the created dialog window
 77 DLGPROC          PIC S9(9) USAGE BINARY.
*               Resource identity containing the dialog template
 77 RESOURCE         PIC S9(9) USAGE BINARY.
*               Dialog-template identity within the resource file
 77 DLGID            PIC S9(9) USAGE BINARY.
*               Application-defined data area (CREATEPARAMS→ HSTRUCT)
 77 CREATEPARAMS     PIC S9(9) USAGE BINARY.
*               Reply value
 77 RESULT           PIC S9(9) USAGE BINARY.
```

WinDrawBitmap - WIDBMP

```
       CALL "WIDBMP" USING    HPS, HBM, XLEFT, YBOTTOM, XRIGHT, YTOP, XLEFT-2, YBOTTOM-2,
                              XRIGHT-2, YTOP-2, FORECOLOR, BACKCOLOR, RGF, SUCCESS.

      *            Handle of presentation space in which the bit map is drawn
       77 HPS          PIC S9(9) USAGE BINARY.
      *            Bit-map handle
       77 HBM          PIC S9(9) USAGE BINARY.
      *            Subrectangle of bit map to be drawn
       77 XLEFT        PIC S9(9) USAGE BINARY.
       77 YBOTTOM      PIC S9(9) USAGE BINARY.
       77 XRIGHT       PIC S9(9) USAGE BINARY.
       77 YTOP         PIC S9(9) USAGE BINARY.
      *            Bit-map destination
       77 XLEFT-2      PIC S9(9) USAGE BINARY.
       77 YBOTTOM-2    PIC S9(9) USAGE BINARY.
       77 XRIGHT-2     PIC S9(9) USAGE BINARY.
       77 YTOP-2       PIC S9(9) USAGE BINARY.
      *            Foreground color
       77 FORECOLOR    PIC S9(9) USAGE BINARY.
      *            Background color
       77 BACKCOLOR    PIC S9(9) USAGE BINARY.
      *            Flags that determine how the bit map is drawn
       77 RGF          PIC S9(9) USAGE BINARY.
      *            Success indicator
       77 SUCCESS      PIC S9(9) USAGE BINARY.
```

WinDrawBorder - WIBORD

```
       CALL "WIBORD" USING    HPS, XLEFT, YBOTTOM, XRIGHT, YTOP, VERTSIDEWIDTH, HORIZSIDEWIDTH,
                              BORDERCOLOR, INTERIORCOLOR, CMD, SUCCESS.

      *                Presentation-space handle
       77 HPS              PIC S9(9) USAGE BINARY.
      *                Bounding rectangle for the border
       77 XLEFT            PIC S9(9) USAGE BINARY.
       77 YBOTTOM          PIC S9(9) USAGE BINARY.
       77 XRIGHT           PIC S9(9) USAGE BINARY.
       77 YTOP             PIC S9(9) USAGE BINARY.
      *                Width of border rectangle vertical sides
       77 VERTSIDEWIDTH    PIC S9(9) USAGE BINARY.
      *                Width of border rectangle horizontal sides
       77 HORIZSIDEWIDTH   PIC S9(9) USAGE BINARY.
      *                Color of edge of border
       77 BORDERCOLOR      PIC S9(9) USAGE BINARY.
      *                Color of interior of border
       77 INTERIORCOLOR    PIC S9(9) USAGE BINARY.
      *                Flags controlling the way in which the border is drawn
       77 CMD              PIC S9(9) USAGE BINARY.
      *                Success indicator
       77 SUCCESS          PIC S9(9) USAGE BINARY.
```

WinDrawPointer - WMDRPT

```
       CALL "WMDRPT" USING    HPS, X, Y, POINTER-1, HALFTONE, SUCCESS.

      *           Presentation-space handle into which the pointer is drawn
       77 HPS       PIC S9(9) USAGE BINARY.
      *           X coordinate at which to draw the pointer, in device coordinates
       77 X         PIC S9(9) USAGE BINARY.
      *           Y coordinate at which to draw the pointer, in device coordinates
       77 Y         PIC S9(9) USAGE BINARY.
      *           Pointer handle
       77 POINTER-1  PIC S9(9) USAGE BINARY.
      *           Shading control
       77 HALFTONE   PIC S9(9) USAGE BINARY.
      *           Success indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinDrawText - WIDTXT

```
       CALL "WIDTXT" USING   HPS, COUNT-1, TEXT-1, XLEFT, YBOTTOM, XRIGHT, YTOP, FORECOLOR,
                             BACKCOLOR, CMD, CHARS.

      *           Presentation-space handle
       77 HPS          PIC S9(9) USAGE BINARY.
      *           Count of the number of characters in the string
       77 COUNT-1      PIC S9(9) USAGE BINARY.
      *           Character string to be drawn
       77 TEXT-1       PIC X(count-1).
      *           Text rectangle
       77 XLEFT        PIC S9(9) USAGE BINARY.
       77 YBOTTOM      PIC S9(9) USAGE BINARY.
       77 XRIGHT       PIC S9(9) USAGE BINARY.
       77 YTOP         PIC S9(9) USAGE BINARY.
      *           Foreground color
       77 FORECOLOR    PIC S9(9) USAGE BINARY.
      *           Background color
       77 BACKCOLOR    PIC S9(9) USAGE BINARY.
      *           An array of flags that determines how the text is drawn
       77 CMD          PIC S9(9) USAGE BINARY.
      *           Count of characters drawn within the rectangle
       77 CHARS        PIC S9(9) USAGE BINARY.
```

WinEmptyClipbrd - WIECB

```
       CALL "WIECB" USING   HAB, SUCCESS.

      *          Anchor-block handle
       77 HAB       PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinEnablePhysInput - WDEPI

```
       CALL "WDEPI" USING   DESKTOP, NEWINPUTSTATE, OLDINPUTSTATE.

      *               Desktop-window handle
       77 DESKTOP          PIC S9(9) USAGE BINARY.
      *               New state for the queuing of physical input
       77 NEWINPUTSTATE    PIC S9(9) USAGE BINARY.
      *               Previous state for the queuing of physical input
       77 OLDINPUTSTATE    PIC S9(9) USAGE BINARY.
```

WinEnableWindow - WISENA

```
CALL "WISENA" USING   HWND, NEWENABLED, SUCCESS.

*             Window handle
 77 HWND           PIC S9(9) USAGE BINARY.
*             New enabled state
 77 NEWENABLED     PIC S9(9) USAGE BINARY.
*             Window enabled indicator
 77 SUCCESS        PIC S9(9) USAGE BINARY.
```

WinEnableWindowUpdate - WIEWU

```
CALL "WIEWU" USING   HWND, NEWVISIBILITY, SUCCESS.

*               Window handle
 77 HWND           PIC S9(9) USAGE BINARY.
*               New visibility state
 77 NEWVISIBILITY  PIC S9(9) USAGE BINARY.
*               Visibility-changed indicator
 77 SUCCESS        PIC S9(9) USAGE BINARY.
```

WinEndEnumWindows - WIEEW

```
CALL "WIEEW" USING   HENUM, SUCCESS.

*          Enumeration handle
 77 HENUM      PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinEndPaint - WIEPNT

```
CALL "WIEPNT" USING   HPS, SUCCESS.

*          Presentation-space handle
 77 HPS        PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinEnumClipbrdFmts - WIECF

```
CALL "WIECF" USING   HAB, PREV, NEXT-1.

*         Anchor-block handle
 77 HAB      PIC S9(9) USAGE BINARY.
*         Previous clipboard-data format index
 77 PREV     PIC S9(9) USAGE BINARY.
*         Next clipboard-data format index
 77 NEXT-1   PIC S9(9) USAGE BINARY.
```

WinEnumDlgItem - WCEDLI

```
CALL "WCEDLI" USING   DLG, HWND, CODE-1, LOCK-1, ITEM.

*         Dialog-window handle
 77 DLG      PIC S9(9) USAGE BINARY.
*         Child-window handle
 77 HWND     PIC S9(9) USAGE BINARY.
*         Item-type code
 77 CODE-1   PIC S9(9) USAGE BINARY.
*         Lock indicator
 77 LOCK-1   PIC S9(9) USAGE BINARY.
*         Item-window handle
 77 ITEM     PIC S9(9) USAGE BINARY.
```

WinEqualRect - WIEREC

```
       CALL "WIEREC" USING   HAB, XLEFT, YBOTTOM, XRIGHT, YTOP, XLEFT-2, YBOTTOM-2, XRIGHT-2,
                             YTOP-2, EQUAL-1.

      *            Anchor-block handle
       77 HAB          PIC S9(9) USAGE BINARY.
      *            First rectangle
       77 XLEFT        PIC S9(9) USAGE BINARY.
       77 YBOTTOM      PIC S9(9) USAGE BINARY.
       77 XRIGHT       PIC S9(9) USAGE BINARY.
       77 YTOP         PIC S9(9) USAGE BINARY.
      *            Second rectangle
       77 XLEFT-2      PIC S9(9) USAGE BINARY.
       77 YBOTTOM-2    PIC S9(9) USAGE BINARY.
       77 XRIGHT-2     PIC S9(9) USAGE BINARY.
       77 YTOP-2       PIC S9(9) USAGE BINARY.
      *            Equality indicator
       77 EQUAL-1      PIC S9(9) USAGE BINARY.
```

WinExcludeUpdateRegion - WIEUPR

```
       CALL "WIEUPR" USING   HPS, HWND, COMPLEXITY.

      *             Presentation-space handle whose clipping region is to be updated
       77 HPS           PIC S9(9) USAGE BINARY.
      *             Window handle
       77 HWND          PIC S9(9) USAGE BINARY.
      *             Complexity value
       77 COMPLEXITY    PIC S9(9) USAGE BINARY.
```

WinFillRect - WIFRCT

```
       CALL "WIFRCT" USING   HPS, XLEFT, YBOTTOM, XRIGHT, YTOP, COLOR, SUCCESS.

      *          Presentation-space handle
       77 HPS         PIC S9(9) USAGE BINARY.
      *          Rectangle to be filled, in window coordinates
       77 XLEFT       PIC S9(9) USAGE BINARY.
       77 YBOTTOM     PIC S9(9) USAGE BINARY.
       77 XRIGHT      PIC S9(9) USAGE BINARY.
       77 YTOP        PIC S9(9) USAGE BINARY.
      *          Color with which to fill the rectangle
       77 COLOR       PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinFindAtom - WMFNAT

```
       CALL "WMFNAT" USING    ATOMTBL, LENGTH-1, STRING-1, ATOM.

      *           Atom-table handle
       77 ATOMTBL     PIC S9(9) USAGE BINARY.
      *           Atom name
       77 LENGTH-1    PIC S9(9) USAGE BINARY.
       77 STRING-1    PIC X(length-1).
      *           Atom value
       77 ATOM        PIC S9(9) USAGE BINARY.
```

WinFlashWindow - WIFLSH

```
       CALL "WIFLSH" USING   HWND, FLASH, SUCCESS.

      *          Handle of window to be flashed
       77 HWND        PIC S9(9) USAGE BINARY.
      *          Start-flashing indicator
       77 FLASH       PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinFocusChange - WMFOCC

```
      CALL "WMFOCC" USING    DESKTOP, NEWFOCUS, FOCUSCHANGE, SUCCESS.

*             Desktop-window handle
 77 DESKTOP         PIC S9(9) USAGE BINARY.
*             Window handle to receive the focus
 77 NEWFOCUS        PIC S9(9) USAGE BINARY.
*             Focus changing indicators
 77 FOCUSCHANGE     PIC S9(9) USAGE BINARY.
*             Success indicator
 77 SUCCESS         PIC S9(9) USAGE BINARY.
```

WinFreeErrorInfo - WMFERI

```
      CALL "WMFERI" USING    ERRORINFO, SUCCESS.

*            Error-information block whose memory is to be released (ERRINFO→ HSTRUCT)
 77 ERRORINFO     PIC S9(9) USAGE BINARY.
*            Success indicator
 77 SUCCESS       PIC S9(9) USAGE BINARY.
```

WinFreeMsg - WUFMSG

```
      CALL "WUFMSG" USING    HAB, HWND, MSGID, PARAM1, PARAM2, REPLY, SUCCESS.

*          Anchor-block handle
 77 HAB        PIC S9(9) USAGE BINARY.
*          Window handle
 77 HWND       PIC S9(9) USAGE BINARY.
*          Message identity
 77 MSGID      PIC S9(9) USAGE BINARY.
*          Message parameter 1 (MPARAM: Can also be HSTRUCT or COMPOSED)
 77 PARAM1     PIC S9(9) USAGE BINARY.
*          Message parameter 2 (MPARAM: Can also be HSTRUCT or COMPOSED)
 77 PARAM2     PIC S9(9) USAGE BINARY.
*          Message reply (MRESULT: Can also be HSTRUCT or COMPOSED)
 77 REPLY      PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinGetClipPS - WPGCPS

```
      CALL "WPGCPS" USING    HWND, CLIPWINDOW, CLIPFLAGS, HPS.

*             Handle of window for which the presentation space is required
 77 HWND          PIC S9(9) USAGE BINARY.
*             Handle of window for clipping
 77 CLIPWINDOW    PIC S9(9) USAGE BINARY.
*             Clipping control flags
 77 CLIPFLAGS     PIC S9(9) USAGE BINARY.
*             Presentation-space handle that can be used for drawing
 77 HPS           PIC S9(9) USAGE BINARY.
```

WinGetCurrentTime - WIGCTI

```
      CALL "WIGCTI" USING  HAB, TIME-1.

*         Anchor-block handle
 77 HAB     PIC S9(9) USAGE BINARY.
*         System-timer count
 77 TIME-1  PIC S9(9) USAGE BINARY.
```

WinGetDlgMsg - WCGETD

```
       CALL "WCGETD" USING    DLG, MSG, RESULT.

      *         Dialog-window handle
       77 DLG       PIC S9(9) USAGE BINARY.
      *         Message structure
       01 MSG.
          COPY QMSG.
      *         Continue message indicator
       77 RESULT    PIC S9(9) USAGE BINARY.
```

WinGetErrorInfo - WMGEI

```
       CALL "WMGEI" USING    HAB, ERRORINFO.

      *            Anchor-block handle
       77 HAB          PIC S9(9) USAGE BINARY.
      *            Error information (ERRINFO→ HSTRUCT)
       77 ERRORINFO    PIC S9(9) USAGE BINARY.
```

WinGetKeyState - WMKEYS

```
       CALL "WMKEYS" USING    DESKTOP, VK, KEYSTATE.

      *           Desktop-window handle:
       77 DESKTOP     PIC S9(9) USAGE BINARY.
      *           Virtual key value
       77 VK          PIC S9(9) USAGE BINARY.
      *           Key state
       77 KEYSTATE    PIC S9(9) USAGE BINARY.
```

WinGetLastError - WMGLE

```
       CALL "WMGLE" USING    HAB, ERRORCODE.

      *            Anchor-block handle
       77 HAB           PIC S9(9) USAGE BINARY.
      *            Last-error state
       77 ERRORCODE     PIC S9(9) USAGE BINARY.
```

WinGetMinPosition - WIGMNP

```
       CALL "WIGMNP" USING    HWND, SWP, X, Y, SUCCESS.

      *         Frame-window handle
       77 HWND       PIC S9(9) USAGE BINARY.
      *         Set window position structure
       01 SWP.
          COPY SWP.
      *         Preferred position
       77 X          PIC S9(9) USAGE BINARY.
       77 Y          PIC S9(9) USAGE BINARY.
      *         Success indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinGetMsg - WMGET

```
       CALL "WMGET" USING    HAB, MSG, FILTER, FIRST-1, LAST-1, RESULT.

      *          Anchor-block handle
       77 HAB      PIC S9(9) USAGE BINARY.
      *          Message structure
       01 MSG.
          COPY QMSG.
      *          Window filter
       77 FILTER   PIC S9(9) USAGE BINARY.
      *          First message identity
       77 FIRST-1  PIC S9(9) USAGE BINARY.
      *          Last message identity
       77 LAST-1   PIC S9(9) USAGE BINARY.
      *          Continue message indicator
       77 RESULT   PIC S9(9) USAGE BINARY.
```

WinGetNextWindow - WIGWIN

```
       CALL "WIGWIN" USING   HENUM, NEXT-1.

      *         Enumeration handle
       77 HENUM     PIC S9(9) USAGE BINARY.
      *         Next window handle in enumeration list
       77 NEXT-1    PIC S9(9) USAGE BINARY.
```

WinGetPhysKeyState - WMGPKS

```
       CALL "WMGPKS" USING    DESKTOP, SCANCODE, KEYSTATE.

      *           Desktop-window handle
       77 DESKTOP     PIC S9(9) USAGE BINARY.
      *           Hardware scancode
       77 SCANCODE    PIC S9(9) USAGE BINARY.
      *           Key state
       77 KEYSTATE    PIC S9(9) USAGE BINARY.
```

WinGetPS - WPGPS

```
       CALL "WPGPS" USING    HWND, HPS.

      *        Handle of window for which the presentation space is required
       77 HWND     PIC S9(9) USAGE BINARY.
      *        Presentation-space handle that can be used for drawing in the window
       77 HPS      PIC S9(9) USAGE BINARY.
```

WinGetScreenPS - WPGSPS

```
       CALL "WPGSPS" USING    DESKTOP, SCREENPS.

      *           Desktop-window handle
       77 DESKTOP     PIC S9(9) USAGE BINARY.
      *           Presentation-space handle
       77 SCREENPS    PIC S9(9) USAGE BINARY.
```

WinGetSysBitmap - WIQSBM

```
       CALL "WIQSBM" USING    DESKTOP, INDEX-1, HBM.

      *           Desktop-window handle
       77 DESKTOP     PIC S9(9) USAGE BINARY.
      *           System bit-map index value
       77 INDEX-1     PIC S9(9) USAGE BINARY.
      *           System bit-map handle
       77 HBM         PIC S9(9) USAGE BINARY.
```

WinInflateRect - WINFLR

```
       CALL "WINFLR" USING   HAB, XLEFT, YBOTTOM, XRIGHT, YTOP, CX, CY, SUCCESS.

      *          Anchor-block handle
       77 HAB         PIC S9(9) USAGE BINARY.
      *          Rectangle to be expanded
       77 XLEFT       PIC S9(9) USAGE BINARY.
       77 YBOTTOM     PIC S9(9) USAGE BINARY.
       77 XRIGHT      PIC S9(9) USAGE BINARY.
       77 YTOP        PIC S9(9) USAGE BINARY.
      *          Horizontal expansion
       77 CX          PIC S9(9) USAGE BINARY.
      *          Vertical expansion
       77 CY          PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinInitialize - WMINIT

```
       CALL "WMINIT" USING   OPTIONS, HAB.

      *           Initialization options
       77 OPTIONS    PIC S9(9) USAGE BINARY.
      *           Anchor-block handle
       77 HAB        PIC S9(9) USAGE BINARY.
```

WinInSendMsg - WCISMG

```
       CALL "WCISMG" USING    HAB, PROCESSING.

      *            Anchor-block handle
       77 HAB           PIC S9(9) USAGE BINARY.
      *            Message-processing indicator
       77 PROCESSING    PIC S9(9) USAGE BINARY.
```

WinInstStartApp - WMISAP

```
       CALL "WMISAP" USING    HINI, NOTIFYWINDOW, COUNT-1, APPLICATION-ARRAY, LENGTH-1,
                              STRING-1, DATA-1, OPTIONS, HAPP.

      *              Initialization-file handle
       77 HINI            PIC S9(9) USAGE BINARY.
      *              Notification-window handle
       77 NOTIFYWINDOW    PIC S9(9) USAGE BINARY.
      *              Count of elements in the name parameter. Must be 1 or 2
       77 COUNT-1         PIC S9(9) USAGE BINARY.
      *              Identifier of the application to be started (STRL→ HSTRUCT)
       01 APPLICATION-ARRAY.
          02 APPLICATION   PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
      *              Input parameters for the application to be started
       77 LENGTH-1        PIC S9(9) USAGE BINARY.
       77 STRING-1        PIC X(length-1).
      *              Start data (STORAGE→ HSTRUCT)
       77 DATA-1          PIC S9(9) USAGE BINARY.
      *              Option indicators
       77 OPTIONS         PIC S9(9) USAGE BINARY.
      *              Application handle
       77 HAPP            PIC S9(9) USAGE BINARY.
```

WinIntersectRect - WINTSR

```
CALL "WINTSR" USING   HAB, XLEFT, YBOTTOM, XRIGHT, YTOP, XLEFT-2, YBOTTOM-2, XRIGHT-2,
                      YTOP-2, XLEFT-3, YBOTTOM-3, XRIGHT-3, YTOP-3, SUCCESS.

*           Anchor-block handle
 77 HAB         PIC S9(9) USAGE BINARY.
*           Intersection rectangle
 77 XLEFT       PIC S9(9) USAGE BINARY.
 77 YBOTTOM     PIC S9(9) USAGE BINARY.
 77 XRIGHT      PIC S9(9) USAGE BINARY.
 77 YTOP        PIC S9(9) USAGE BINARY.
*           First rectangle
 77 XLEFT-2     PIC S9(9) USAGE BINARY.
 77 YBOTTOM-2   PIC S9(9) USAGE BINARY.
 77 XRIGHT-2    PIC S9(9) USAGE BINARY.
 77 YTOP-2      PIC S9(9) USAGE BINARY.
*           Second rectangle
 77 XLEFT-3     PIC S9(9) USAGE BINARY.
 77 YBOTTOM-3   PIC S9(9) USAGE BINARY.
 77 XRIGHT-3    PIC S9(9) USAGE BINARY.
 77 YTOP-3      PIC S9(9) USAGE BINARY.
*           Success indicator
 77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinInvalidateRect - WINVR

```
CALL "WINVR" USING   HWND, XLEFT, YBOTTOM, XRIGHT, YTOP, INCLUDECLIPPEDCHILDREN,
                     SUCCESS.

*                      Handle of window whose update region is to be changed
 77 HWND                    PIC S9(9) USAGE BINARY.
*                      Update rectangle
 77 XLEFT                   PIC S9(9) USAGE BINARY.
 77 YBOTTOM                 PIC S9(9) USAGE BINARY.
 77 XRIGHT                  PIC S9(9) USAGE BINARY.
 77 YTOP                    PIC S9(9) USAGE BINARY.
*                      Invalidation-scope indicator
 77 INCLUDECLIPPEDCHILDREN  PIC S9(9) USAGE BINARY.
*                      Success indicator
 77 SUCCESS                 PIC S9(9) USAGE BINARY.
```

WinInvalidateRegion - WINVRG

```
CALL "WINVRG" USING   HWND, HRGN, INCLUDECLIPPEDCHILDREN, SUCCESS.

*                      Handle of window whose update region is to be changed
 77 HWND                    PIC S9(9) USAGE BINARY.
*                      Handle of the region to be added to the window's update region
 77 HRGN                    PIC S9(9) USAGE BINARY.
*                      Invalidation-scope indicator
 77 INCLUDECLIPPEDCHILDREN  PIC S9(9) USAGE BINARY.
*                      Success indicator
 77 SUCCESS                 PIC S9(9) USAGE BINARY.
```

WinInvertRect - WINVER

```
CALL "WINVER" USING   HPS, XLEFT, YBOTTOM, XRIGHT, YTOP, SUCCESS.

*          Presentation-space handle
 77 HPS        PIC S9(9) USAGE BINARY.
*          Rectangle to be inverted
 77 XLEFT      PIC S9(9) USAGE BINARY.
 77 YBOTTOM    PIC S9(9) USAGE BINARY.
 77 XRIGHT     PIC S9(9) USAGE BINARY.
 77 YTOP       PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinIsChild - WICHLD

```
CALL "WICHLD" USING   CHILD, PARENT, RELATED.

*          Child-window handle
 77 CHILD      PIC S9(9) USAGE BINARY.
*          Parent-window handle
 77 PARENT     PIC S9(9) USAGE BINARY.
*          Related indicator
 77 RELATED    PIC S9(9) USAGE BINARY.
```

WinIsRectEmpty - WIREMP

```
CALL "WIREMP" USING   HAB, XLEFT, YBOTTOM, XRIGHT, YTOP, EMPTY.

*          Anchor-block handle
 77 HAB         PIC S9(9) USAGE BINARY.
*          Rectangle
 77 XLEFT       PIC S9(9) USAGE BINARY.
 77 YBOTTOM     PIC S9(9) USAGE BINARY.
 77 XRIGHT      PIC S9(9) USAGE BINARY.
 77 YTOP        PIC S9(9) USAGE BINARY.
*          Empty indicator
 77 EMPTY       PIC S9(9) USAGE BINARY.
```

WinIsThreadActive - WMTHRA

```
CALL "WMTHRA" USING    HAB, ACTIVE.

*         Anchor-block handle of calling thread
 77 HAB      PIC S9(9) USAGE BINARY.
*         Active-window indicator
 77 ACTIVE   PIC S9(9) USAGE BINARY.
```

WinIsWindow - WISWIN

```
CALL "WISWIN" USING   HAB, HWND, VALID.

*        Anchor-block handle
 77 HAB     PIC S9(9) USAGE BINARY.
*        Window handle
 77 HWND    PIC S9(9) USAGE BINARY.
*        Validity indicator
 77 VALID   PIC S9(9) USAGE BINARY.
```

WinIsWindowEnabled - WIQENA

```
CALL "WIQENA" USING   HWND, ENABLED.

*          Window handle
 77 HWND       PIC S9(9) USAGE BINARY.
*          Enabled-state indicator
 77 ENABLED    PIC S9(9) USAGE BINARY.
```

WinIsWindowShowing - WIQSHO

```
CALL "WIQSHO" USING   HWND, SHOWING.

*          Window handle
 77 HWND       PIC S9(9) USAGE BINARY.
*          Showing state indicator
 77 SHOWING    PIC S9(9) USAGE BINARY.
```

WinIsWindowVisible - WIQVIS

```
CALL "WIQVIS" USING   HWND, VISIBLE.

*          Window handle
 77 HWND     PIC S9(9) USAGE BINARY.
*          Visibility-state indicator
 77 VISIBLE  PIC S9(9) USAGE BINARY.
```

WinLoadAccelTable - WMLACT

```
CALL "WMLACT" USING    HAB, RESOURCE, ACCELTABLE, ACCEL.

*              Anchor-block handle
 77 HAB            PIC S9(9) USAGE BINARY.
*              Resource identity containing the accelerator table
 77 RESOURCE       PIC S9(9) USAGE BINARY.
*              Accelerator-table identifier, within the resource file
 77 ACCELTABLE     PIC S9(9) USAGE BINARY.
*              Accelerator-table handle
 77 ACCEL          PIC S9(9) USAGE BINARY.
```

WinLoadDlg - WCLD

```
CALL "WCLD" USING   PARENT, OWNER, DLGPROC, RESOURCE, DLGID, CREATEPARAMS, DLG.

*                Parent-window handle of the created dialog window
 77 PARENT            PIC S9(9) USAGE BINARY.
*                Requested owner-window handle of the created dialog window
 77 OWNER             PIC S9(9) USAGE BINARY.
*                Dialog procedure for the created dialog window
 77 DLGPROC           PIC S9(9) USAGE BINARY.
*                Resource identity containing the dialog template
 77 RESOURCE          PIC S9(9) USAGE BINARY.
*                Dialog-template identity within the resource file
 77 DLGID             PIC S9(9) USAGE BINARY.
*                Application-defined data area (CREATEPARAMS→ HSTRUCT)
 77 CREATEPARAMS      PIC S9(9) USAGE BINARY.
*                Dialog-window handle
 77 DLG               PIC S9(9) USAGE BINARY.
```

WinLoadLibrary - WMLLIB

```
CALL "WMLLIB" USING   HAB, LENGTH-1, STRING-1, LIBHANDLE.

*             Anchor-block handle
 77 HAB           PIC S9(9) USAGE BINARY.
*             Library name
 77 LENGTH-1      PIC S9(9) USAGE BINARY.
 77 STRING-1      PIC X(length-1).
*             Library handle
 77 LIBHANDLE     PIC S9(9) USAGE BINARY.
```

WinLoadMenu - WCLM

```
CALL "WCLM" USING    OWNER, RESOURCE, MENUID, MENU.

*           Owner- and parent-window handle
 77 OWNER        PIC S9(9) USAGE BINARY.
*           Resource identifier
 77 RESOURCE     PIC S9(9) USAGE BINARY.
*           Menu identifier within the resource file
 77 MENUID       PIC S9(9) USAGE BINARY.
*           Menu-window handle
 77 MENU         PIC S9(9) USAGE BINARY.
```

WinLoadPointer - WMLPOI

```
       CALL "WMLPOI" USING    DESKTOP, RESOURCE, POINTER-1, HPTR.

      *            Desktop-window handle
       77 DESKTOP     PIC S9(9) USAGE BINARY.
      *            Resource identity containing the pointer definition
       77 RESOURCE    PIC S9(9) USAGE BINARY.
      *            Identifier of the pointer to be loaded
       77 POINTER-1   PIC S9(9) USAGE BINARY.
      *            Pointer handle
       77 HPTR        PIC S9(9) USAGE BINARY.
```

WinLoadProcedure - WMLPR

```
       CALL "WMLPR" USING    HAB, LIBHANDLE, LENGTH-1, STRING-1, WNDPROC.

      *            Anchor-block handle
       77 HAB          PIC S9(9) USAGE BINARY.
      *            Library handle
       77 LIBHANDLE    PIC S9(9) USAGE BINARY.
      *            Procedure name
       77 LENGTH-1     PIC S9(9) USAGE BINARY.
       77 STRING-1     PIC X(length-1).
      *            Window-procedure identifier
       77 WNDPROC      PIC S9(9) USAGE BINARY.
```

WinLoadString - WMLSTR

```
       CALL "WMLSTR" USING    HAB, RESOURCE, STRING-1, BUFFERMAX, BUFFER, LENGTH-1.

      *            Anchor-block handle
       77 HAB          PIC S9(9) USAGE BINARY.
      *            Resource identity containing the string
       77 RESOURCE     PIC S9(9) USAGE BINARY.
      *            String identifier
       77 STRING-1     PIC S9(9) USAGE BINARY.
      *            Size of buffer
       77 BUFFERMAX    PIC S9(9) USAGE BINARY.
      *            Buffer that is to receive the string ( LENGTH-1 is result string length)
       77 BUFFER       PIC X(buffermax).
      *            The length of the string returned
       77 LENGTH-1     PIC S9(9) USAGE BINARY.
```

WinLockVisRegions - WILKVR

```
       CALL "WILKVR" USING   DESKTOP, LOCK-1, SUCCESS.

      *           Desktop-window handle or HWND_DESKTOP
       77 DESKTOP    PIC S9(9) USAGE BINARY.
      *           Indicates whether the visible regions are being locked or unlocked
       77 LOCK-1     PIC S9(9) USAGE BINARY.
      *           Success indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinLockWindow - WILKWN

```
       CALL "WILKWN" USING    HWND, LOCK-1, RET.

      *         Window handle
       77 HWND     PIC S9(9) USAGE BINARY.
      *         Lock indicator
       77 LOCK-1   PIC S9(9) USAGE BINARY.
      *         Locked-window handle
       77 RET      PIC S9(9) USAGE BINARY.
```

WinLockWindowUpdate - WMLKWU

```
CALL "WMLKWU" USING     DESKTOP, LOCKUPDATE, SUCCESS.

*            Desktop handle of the screen containing the window to be locked
 77 DESKTOP        PIC S9(9) USAGE BINARY.
*            Handle of window in which output is to be prevented
 77 LOCKUPDATE     PIC S9(9) USAGE BINARY.
*            Success indicator
 77 SUCCESS        PIC S9(9) USAGE BINARY.
```

WinMapDlgPoints - WCMDP

```
CALL "WCMDP" USING    DLG, X-ARRAY, Y-ARRAY, COUNT-1, OPTIONS, SUCCESS.

*          Dialog-window handle
 77 DLG       PIC S9(9) USAGE BINARY.
*          Coordinate points to be mapped
 01 X-ARRAY.
    02 X      PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
 01 Y-ARRAY.
    02 Y      PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
*          Number of coordinate points
 77 COUNT-1   PIC S9(9) USAGE BINARY.
*          Calculation control
 77 OPTIONS   PIC S9(9) USAGE BINARY.
*          Coordinates-mapped indicator
 77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinMapWindowPoints - WIMAPW

```
CALL "WIMAPW" USING    FROM-1, TO-1, X-ARRAY, Y-ARRAY, COUNT-1, SUCCESS.

*          Handle of the window from whose coordinates points are to be mapped
 77 FROM-1    PIC S9(9) USAGE BINARY.
*          Handle of the window to whose coordinates points are to be mapped
 77 TO-1      PIC S9(9) USAGE BINARY.
*          Points to be mapped to the new coordinate system
 01 X-ARRAY.
    02 X      PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
 01 Y-ARRAY.
    02 Y      PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
*          Number of points to be mapped
 77 COUNT-1   PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinMessageBox - WCMBOX

```
CALL "WCMBOX" USING     PARENT, OWNER, LENGTH-1, STRING-1, LENGTH-2, STRING-2, WINDOW,
                        STYLE, RESPONSE.

*           Parent-window handle of the created message-box window
 77 PARENT     PIC S9(9) USAGE BINARY.
*           Requested owner-window handle of the created message-box window
 77 OWNER      PIC S9(9) USAGE BINARY.
*           Message-box window message
 77 LENGTH-1   PIC S9(9) USAGE BINARY.
 77 STRING-1   PIC X(length-1).
*           Message-box window title
 77 LENGTH-2   PIC S9(9) USAGE BINARY.
 77 STRING-2   PIC X(length-2).
*           Message-box window identity
 77 WINDOW     PIC S9(9) USAGE BINARY.
*           Message-box window style
 77 STYLE      PIC S9(9) USAGE BINARY.
*           User-response value
 77 RESPONSE   PIC S9(9) USAGE BINARY.
```

WinModifyDataStructure - WUMDS

```
       CALL "WUMDS" USING    HAB, COUNT-1, TYPES-ARRAY, INLEN, INSTRUC, HANDLE, SUCCESS.

      *          Anchor-block handle
       77 HAB       PIC S9(9) USAGE BINARY.
      *          Number of elements
       77 COUNT-1   PIC S9(9) USAGE BINARY.
      *          Data type codes
       01 TYPES-ARRAY.
          02 TYPES  PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
      *          Length of input structure
       77 INLEN     PIC S9(9) USAGE BINARY.
      *          Input structure
       77 INSTRUC   PIC X(inlen).
      *          Handle of data structure to be modified
       77 HANDLE    PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinMsgMuxSemWait - WMMSWT

```
       CALL "WMMSWT" USING     INDEXNBR, LIST, TIMEOUT, RC.

      *           Index of the cleared semaphore in the list
       77 INDEXNBR    PIC S9(9) USAGE BINARY.
      *           List of semaphore descriptors (STORAGE→ HSTRUCT)
       77 LIST        PIC S9(9) USAGE BINARY.
      *           Function time-out value
       77 TIMEOUT     PIC S9(9) USAGE BINARY.
      *           Return code
       77 RC          PIC S9(9) USAGE BINARY.
```

WinMsgSemWait - WMSWT

```
       CALL "WMSWT" USING    HSEM, TIMEOUT, RC.

      *          Semaphore handle
       77 HSEM      PIC S9(9) USAGE BINARY.
      *          Function time-out value
       77 TIMEOUT   PIC S9(9) USAGE BINARY.
      *          Return code
       77 RC        PIC S9(9) USAGE BINARY.
```

WinMultWindowFromIDs - WIMWID

```
       CALL "WIMWID" USING   PARENT, HWND-ARRAY, FIRST-1, LAST-1, WINDOWS.

      *          Parent-window handle
       77 PARENT    PIC S9(9) USAGE BINARY.
      *          Window handles
       01 HWND-ARRAY.
          02 HWND   PIC S9(9) USAGE BINARY OCCURS (last-1 - first-1 +1) TIMES.
      *          First window identity value in the range (inclusive)
       77 FIRST-1   PIC S9(9) USAGE BINARY.
      *          Last window identity value in the range (inclusive)
       77 LAST-1    PIC S9(9) USAGE BINARY.
      *          Number of window handles returned
       77 WINDOWS   PIC S9(9) USAGE BINARY.
```

WinNextChar - WUNXTC

```
      CALL "WUNXTC" USING    HAB, CODEPAGE, COUNTRY, LENGTH-1, STRING-1, CURRENTCHAR,
                             NEXTCHAR.

*              Anchor-block handle
 77 HAB             PIC S9(9) USAGE BINARY.
*              Code page
 77 CODEPAGE        PIC S9(9) USAGE BINARY.
*              Country code
 77 COUNTRY         PIC S9(9) USAGE BINARY.
*              The string to be processed
 77 LENGTH-1        PIC S9(9) USAGE BINARY.
 77 STRING-1        PIC X(length-1).
*              Index of the current character in the string, in the range 1 (first
character) to length of string (last character), or length+1 (end of string)
 77 CURRENTCHAR     PIC S9(9) USAGE BINARY.
*              Index of the next character in the string. Length+1 indicates that the end
of the string has been reached
 77 NEXTCHAR        PIC S9(9) USAGE BINARY.
```

WinOffsetRect - WIOFFR

```
      CALL "WIOFFR" USING   HAB, XLEFT, YBOTTOM, XRIGHT, YTOP, CX, CY, SUCCESS.

*          Anchor-block handle
 77 HAB        PIC S9(9) USAGE BINARY.
*          Rectangle to be offset
 77 XLEFT      PIC S9(9) USAGE BINARY.
 77 YBOTTOM    PIC S9(9) USAGE BINARY.
 77 XRIGHT     PIC S9(9) USAGE BINARY.
 77 YTOP       PIC S9(9) USAGE BINARY.
*          x value of offset
 77 CX         PIC S9(9) USAGE BINARY.
*          y value of offset
 77 CY         PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinOpenClipbrd - WIOPCB

```
      CALL "WIOPCB" USING   HAB, SUCCESS.

*          Anchor-block handle
 77 HAB        PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinOpenWindowDC - WIOPDC

```
      CALL "WIOPDC" USING   HWND, HDC.

*        Window handle
 77 HWND    PIC S9(9) USAGE BINARY.
*        Device-context handle
 77 HDC     PIC S9(9) USAGE BINARY.
```

WinPeekMsg - WMPEEK

```
       CALL "WMPEEK" USING    HAB, MSG, FILTER, FIRST-1, LAST-1, OPTIONS, RESULT.

      *          Anchor-block handle
       77 HAB      PIC S9(9) USAGE BINARY.
      *          Message structure
       01 MSG.
          COPY QMSG.
      *          Window filter
       77 FILTER   PIC S9(9) USAGE BINARY.
      *          First message identity
       77 FIRST-1  PIC S9(9) USAGE BINARY.
      *          Last message identity
       77 LAST-1   PIC S9(9) USAGE BINARY.
      *          Options
       77 OPTIONS  PIC S9(9) USAGE BINARY.
      *          Message-available indicator
       77 RESULT   PIC S9(9) USAGE BINARY.
```

WinPostMsg - WMPOST

```
       CALL "WMPOST" USING    HWND, MSGID, PARAM1, PARAM2, RESULT.

      *         Window handle
       77 HWND      PIC S9(9) USAGE BINARY.
      *         Message identity
       77 MSGID     PIC S9(9) USAGE BINARY.
      *         Parameter 1 (MPARAM: Can also be HSTRUCT or COMPOSED)
       77 PARAM1    PIC S9(9) USAGE BINARY.
      *         Parameter 2 (MPARAM: Can also be HSTRUCT or COMPOSED)
       77 PARAM2    PIC S9(9) USAGE BINARY.
      *         Message-posted indicator
       77 RESULT    PIC S9(9) USAGE BINARY.
```

WinPostQueueMsg - WCPQM

```
       CALL "WCPQM" USING    HMQ, MSGID, PARAM1, PARAM2, SUCCESS.

      *          Message-queue handle
       77 HMQ       PIC S9(9) USAGE BINARY.
      *          Message identifier
       77 MSGID     PIC S9(9) USAGE BINARY.
      *          Parameter 1 (MPARAM: Can also be HSTRUCT or COMPOSED)
       77 PARAM1    PIC S9(9) USAGE BINARY.
      *          Parameter 2 (MPARAM: Can also be HSTRUCT or COMPOSED)
       77 PARAM2    PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinPrevChar - WUPREC

```
       CALL "WUPREC" USING    HAB, CODEPAGE, COUNTRY, LENGTH-1, STRING-1, CURRENTCHAR,
                              PREVCHAR.

      *              Anchor-block handle
       77 HAB             PIC S9(9) USAGE BINARY.
      *              Code page
       77 CODEPAGE        PIC S9(9) USAGE BINARY.
      *              Country code
       77 COUNTRY         PIC S9(9) USAGE BINARY.
      *              The string to be processed
       77 LENGTH-1        PIC S9(9) USAGE BINARY.
       77 STRING-1        PIC X(length-1).
      *              Index of the current character in the string.
       77 CURRENTCHAR     PIC S9(9) USAGE BINARY.
      *              Index of the previous character in the string.
       77 PREVCHAR        PIC S9(9) USAGE BINARY.
```

WinProcessDlg - WCPD

```
       CALL "WCPD" USING   DLG, RESULT.

      *         Dialog-window handle
       77 DLG       PIC S9(9) USAGE BINARY.
      *         Reply value
       77 RESULT    PIC S9(9) USAGE BINARY.
```

WinPtInRect - WIPTRC

```
       CALL "WIPTRC" USING   HAB, XLEFT, YBOTTOM, XRIGHT, YTOP, X, Y, F.

      *          Anchor-block handle
       77 HAB          PIC S9(9) USAGE BINARY.
      *          Rectangle to be queried
       77 XLEFT        PIC S9(9) USAGE BINARY.
       77 YBOTTOM      PIC S9(9) USAGE BINARY.
       77 XRIGHT       PIC S9(9) USAGE BINARY.
       77 YTOP         PIC S9(9) USAGE BINARY.
      *          Point to be queried
       77 X            PIC S9(9) USAGE BINARY.
       77 Y            PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 F            PIC S9(9) USAGE BINARY.
```

WinQueryAccelTable - WMQACC

```
       CALL "WMQACC" USING     HAB, FRAME, ACCEL.

      *        Anchor-block handle
       77 HAB      PIC S9(9) USAGE BINARY.
      *        Frame-window handle
       77 FRAME    PIC S9(9) USAGE BINARY.
      *        Accelerator-table handle
       77 ACCEL    PIC S9(9) USAGE BINARY.
```

WinQueryActiveWindow - WMQACT

```
       CALL "WMQACT" USING     PARENT, LOCK-1, ACTIVE.

      *          Parent-window handle for which the active window is required
       77 PARENT     PIC S9(9) USAGE BINARY.
      *          Windows lock-state indicator
       77 LOCK-1     PIC S9(9) USAGE BINARY.
      *          Active-window handle
       77 ACTIVE     PIC S9(9) USAGE BINARY.
```

WinQueryAnchorBlock - WIQHAB

```
       CALL "WIQHAB" USING   HWND, HAB.

      *        Window handle
       77 HWND    PIC S9(9) USAGE BINARY.
      *        Anchor block handle
       77 HAB     PIC S9(9) USAGE BINARY.
```

WinQueryAtomLength - WMQALN

```
       CALL "WMQALN" USING    ATOMTBL, ATOM, RETLEN.

      *          Atom-table handle
       77 ATOMTBL    PIC S9(9) USAGE BINARY.
      *          Atom whose associated character-string length is to be returned
       77 ATOM       PIC S9(9) USAGE BINARY.
      *          String length
       77 RETLEN     PIC S9(9) USAGE BINARY.
```

WinQueryAtomName - WMQANM

```
       CALL "WMQANM" USING    ATOMTBL, ATOM, BUFFER, BUFFERMAX, RETLEN.

      *           Atom-table handle
       77 ATOMTBL       PIC S9(9) USAGE BINARY.
      *           Atom; identifies the character string to be retrieved
       77 ATOM          PIC S9(9) USAGE BINARY.
      *           Buffer to receive the character string ( RETLEN is result string length)
       77 BUFFER        PIC X(buffermax).
      *           Buffer size in bytes
       77 BUFFERMAX     PIC S9(9) USAGE BINARY.
      *           Length of retrieved character string
       77 RETLEN        PIC S9(9) USAGE BINARY.
```

WinQueryAtomUsage - WMQAUS

```
       CALL "WMQAUS" USING    ATOMTBL, ATOM, COUNT-1.

      *          Atom-table handle
       77 ATOMTBL    PIC S9(9) USAGE BINARY.
      *          Atom whose use count is to be returned
       77 ATOM       PIC S9(9) USAGE BINARY.
      *          Use count of the atom
       77 COUNT-1    PIC S9(9) USAGE BINARY.
```

WinQueryBits - WUQBIT

```
       CALL "WUQBIT" USING   HAB, INT, DATA-1-ARRAY, SUCCESS.

      *         Anchor-block handle
       77 HAB       PIC S9(9) USAGE BINARY.
      *         Integer whose bits are to be queried
       77 INT       PIC S9(9) USAGE BINARY.
      *         Data indicating the status of the bits
       01 DATA-1-ARRAY.
          02 DATA-1  PIC S9(9) USAGE BINARY OCCURS 32 TIMES.
      *         Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinQueryBitsUnderMask - WUQBM

```
      CALL "WUQBM" USING    HAB, INT, MASK, BITVAL, SUCCESS.

      *          Anchor-block handle
       77 HAB       PIC S9(9) USAGE BINARY.
      *          Integer whose bits are to be queried
       77 INT       PIC S9(9) USAGE BINARY.
      *          Mask identifying the bits to be queried
       77 MASK      PIC S9(9) USAGE BINARY.
      *          Bit value extracted from the integer
       77 BITVAL    PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinQueryCapture - WMQCAP

```
      CALL "WMQCAP" USING    DESKTOP, LOCK-1, HWND.

      *          Desktop-window handle
       77 DESKTOP    PIC S9(9) USAGE BINARY.
      *          Lock-request indicator
       77 LOCK-1     PIC S9(9) USAGE BINARY.
      *          Handle of the window with the pointer captured
       77 HWND       PIC S9(9) USAGE BINARY.
```

WinQueryClassInfo - WMQCLI

```
      CALL "WMQCLI" USING    HAB, LENGTH-1, STRING-1, CLASSINFO, EXISTS.

      *           Anchor-block handle
       77 HAB         PIC S9(9) USAGE BINARY.
      *           Class name
       77 LENGTH-1    PIC S9(9) USAGE BINARY.
       77 STRING-1    PIC X(length-1).
      *           Class information structure
       01 CLASSINFO.
          COPY CLASSINF.
      *           Class-exists indicator
       77 EXISTS      PIC S9(9) USAGE BINARY.
```

WinQueryClassName - WMQCLN

```
      CALL "WMQCLN" USING    HWND, LENGTH-1, BUFFER, RETLEN.

      *          Window handle
       77 HWND       PIC S9(9) USAGE BINARY.
      *          Length of buffer
       77 LENGTH-1   PIC S9(9) USAGE BINARY.
      *          Class name ( RETLEN is result string length)
       77 BUFFER     PIC X(length-1).
      *          Returned class name length
       77 RETLEN     PIC S9(9) USAGE BINARY.
```

WinQueryClipbrdData - WIQCBD

```
      CALL "WIQCBD" USING    HAB, FMT, DATA-1.

      *          Anchor-block handle
       77 HAB      PIC S9(9) USAGE BINARY.
      *          Format of the data to be accessed
       77 FMT      PIC S9(9) USAGE BINARY.
      *          Handle to the clipboard data
       77 DATA-1   PIC S9(9) USAGE BINARY.
```

WinQueryClipbrdFmtInfo - WIQCBF

```
CALL "WIQCBF" USING   HAB, FMT, FMTINFO, EXISTS.

*          Anchor-block handle
 77 HAB       PIC S9(9) USAGE BINARY.
*          Format of the data to be queried
 77 FMT       PIC S9(9) USAGE BINARY.
*          Memory model and usage flags
 77 FMTINFO   PIC S9(9) USAGE BINARY.
*          Format-exists indicator
 77 EXISTS    PIC S9(9) USAGE BINARY.
```

WinQueryClipbrdOwner - WIQCBO

```
CALL "WIQCBO" USING   HAB, LOCK-1, CLIPBRDOWNER.

*              Anchor-block handle
 77 HAB             PIC S9(9) USAGE BINARY.
*              Lock state indicator of clipboard owner window
 77 LOCK-1          PIC S9(9) USAGE BINARY.
*              Window handle of the current clipboard owner
 77 CLIPBRDOWNER    PIC S9(9) USAGE BINARY.
```

WinQueryClipbrdViewer - WIQCBV

```
CALL "WIQCBV" USING   HAB, LOCK-1, CLIPBRDVIEWER.

*               Anchor-block handle
 77 HAB             PIC S9(9) USAGE BINARY.
*               Lock-state indicator of clipboard viewer window
 77 LOCK-1          PIC S9(9) USAGE BINARY.
*               Current clipboard viewer window handle
 77 CLIPBRDVIEWER   PIC S9(9) USAGE BINARY.
```

WinQueryCp - WMGECP

```
CALL "WMGECP" USING    HMQ, CODEPAGE.

*          Message queue
 77 HMQ        PIC S9(9) USAGE BINARY.
*          Code page
 77 CODEPAGE   PIC S9(9) USAGE BINARY.
```

WinQueryCpList - WMQCPL

```
CALL "WMQCPL" USING    HAB, COUNT-1, CODEPAGE-ARRAY, TOTCOUNT.

*          Anchor-block handle
 77 HAB        PIC S9(9) USAGE BINARY.
*          Maximum number of code pages returned
 77 COUNT-1    PIC S9(9) USAGE BINARY.
*          Code page list
 01 CODEPAGE-ARRAY.
    02 CODEPAGE  PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
*          Total number of code pages available
 77 TOTCOUNT   PIC S9(9) USAGE BINARY.
```

WinQueryCursorInfo - WMQCUR

```
CALL "WMQCUR" USING    DESKTOP, CURSORINFO, CURSOR.

*            Desktop-window handle
 77 DESKTOP      PIC S9(9) USAGE BINARY.
*            Cursor information
 01 CURSORINFO.
    COPY CURINF.
*            Current-cursor indicator
 77 CURSOR       PIC S9(9) USAGE BINARY.
```

WinQueryDataStructure - WUQDS

```
CALL "WUQDS" USING    HAB, HANDLE, COUNT-1, TYPES-ARRAY, BUFLEN, OUTSTRUC, OUTLEN,
                      SUCCESS.

*           Anchor-block handle
 77 HAB         PIC S9(9) USAGE BINARY.
*           Handle of data structure to be queried
 77 HANDLE      PIC S9(9) USAGE BINARY.
*           Number of elements
 77 COUNT-1     PIC S9(9) USAGE BINARY.
*           Data type codes
 01 TYPES-ARRAY.
    02 TYPES    PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
*           Length of buffer
 77 BUFLEN      PIC S9(9) USAGE BINARY.
*           Output structure
 77 OUTSTRUC    PIC X(buflen).
*           Length of output structure
 77 OUTLEN      PIC S9(9) USAGE BINARY.
*           Success indicator
 77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinQueryDefinition - WMQDEF

```
CALL "WMQDEF" USING    HAB, PROGHANDLE, PROGRAMINFO, MAXLENGTH, LENGTH-1.

*             Anchor-block handle
 77 HAB            PIC S9(9) USAGE BINARY.
*             Handle of the program whose information is to be returned
 77 PROGHANDLE     PIC S9(9) USAGE BINARY.
*             Program-information data (PIBSTRUCT→ HSTRUCT)
 77 PROGRAMINFO    PIC S9(9) USAGE BINARY.
*             Maximum length in bytes
 77 MAXLENGTH      PIC S9(9) USAGE BINARY.
*             Length of returned data
 77 LENGTH-1       PIC S9(9) USAGE BINARY.
```

WinQueryDesktopWindow - WIQDTW

```
CALL "WIQDTW" USING    HAB, HDC, DESKTOP.

*          Anchor-block handle
 77 HAB        PIC S9(9) USAGE BINARY.
*          Device-context handle
 77 HDC        PIC S9(9) USAGE BINARY.
*          Desktop-window handle
 77 DESKTOP    PIC S9(9) USAGE BINARY.
```

WinQueryDlgItemShort - WCQDIS

```
CALL "WCQDIS" USING    DLG, ITEM, RESULT, SIGNED, SUCCESS.

*          Parent-window handle
 77 DLG        PIC S9(9) USAGE BINARY.
*          Identity of the child window whose text is to be converted
 77 ITEM       PIC S9(9) USAGE BINARY.
*          Integer value resulting from the conversion
 77 RESULT     PIC S9(9) USAGE BINARY.
*          Sign indicator
 77 SIGNED     PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinQueryDlgItemText - WMQDIT

```
       CALL "WMQDIT" USING    DLG, ITEM, MAXTEXT, TEXT-1, RETLEN.

      *          Parent-window handle
       77 DLG        PIC S9(9) USAGE BINARY.
      *          Identity of the child window whose text is to be queried
       77 ITEM       PIC S9(9) USAGE BINARY.
      *          Length of text
       77 MAXTEXT    PIC S9(9) USAGE BINARY.
      *          Output string ( RETLEN is result string length)
       77 TEXT-1     PIC X(maxtext).
      *          Actual number of characters returned
       77 RETLEN     PIC S9(9) USAGE BINARY.
```

WinQueryDlgItemTextLength - WMQDIL

```
       CALL "WMQDIL" USING    DLG, ITEM, RETLEN.

      *         Parent-window handle
       77 DLG       PIC S9(9) USAGE BINARY.
      *         Identity of the child window whose text is to be queried
       77 ITEM      PIC S9(9) USAGE BINARY.
      *         Length of text
       77 RETLEN    PIC S9(9) USAGE BINARY.
```

WinQueryFocus - WMQFOC

```
       CALL "WMQFOC" USING     DESKTOP, LOCK-1, FOCUS.

      *           Desktop-window handle
       77 DESKTOP     PIC S9(9) USAGE BINARY.
      *           Window lock state indicator
       77 LOCK-1      PIC S9(9) USAGE BINARY.
      *           Focus-handle
       77 FOCUS       PIC S9(9) USAGE BINARY.
```

WinQueryMsgPos - WCQMPO

```
       CALL "WCQMPO" USING     HAB, X, Y, SUCCESS.

      *          Anchor-block handle
       77 HAB        PIC S9(9) USAGE BINARY.
      *          Pointer position in screen coordinates
       77 X          PIC S9(9) USAGE BINARY.
       77 Y          PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinQueryMsgTime - WCQMTI

```
       CALL "WCQMTI" USING    HAB, TIME-1.

      *         Anchor-block handle
       77 HAB      PIC S9(9) USAGE BINARY.
      *         Time in milliseconds
       77 TIME-1   PIC S9(9) USAGE BINARY.
```

WinQueryObjectWindow - WIQOBJ

```
       CALL "WIQOBJ" USING    DESKTOP, OBJECT.

      *           Desktop-window handle
       77 DESKTOP     PIC S9(9) USAGE BINARY.
      *           Object-window handle
       77 OBJECT      PIC S9(9) USAGE BINARY.
```

WinQueryPointer - WMQPTR

```
       CALL "WMQPTR" USING    DESKTOP, POINTER-1.

      *           Desktop-window handle
       77 DESKTOP     PIC S9(9) USAGE BINARY.
      *           Pointer handle
       77 POINTER-1   PIC S9(9) USAGE BINARY.
```

WinQueryPointerInfo - WMQPTD

```
       CALL "WMQPTD" USING    HPTR, POINTERINFO, SUCCESS.

      *             Pointer handle
       77 HPTR          PIC S9(9) USAGE BINARY.
      *             Pointer-information structure
       01 POINTERINFO.
          COPY PTRINF.
      *             Success indicator
       77 SUCCESS       PIC S9(9) USAGE BINARY.
```

WinQueryPointerPos - WMQPTP

```
       CALL "WMQPTP" USING    DESKTOP, X, Y, SUCCESS.

      *           Desktop-window handle
       77 DESKTOP     PIC S9(9) USAGE BINARY.
      *           Pointer position in screen coordinates
       77 X           PIC S9(9) USAGE BINARY.
       77 Y           PIC S9(9) USAGE BINARY.
      *           Pointer position returned indicator
       77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinQueryPresParam - WMQPP

```
       CALL "WMQPP" USING    HWND, ATTRTYPE1, ATTRTYPE2, ATTRTYPEFOUND, ATTRVALUELEN,
                             ATTRVALUE, OPTIONS, RETLEN.

      *               Window handle
       77 HWND              PIC S9(9) USAGE BINARY.
      *               First attribute type identity
       77 ATTRTYPE1         PIC S9(9) USAGE BINARY.
      *               Second attribute type identity
       77 ATTRTYPE2         PIC S9(9) USAGE BINARY.
      *               Attribute type identity found
       77 ATTRTYPEFOUND     PIC S9(9) USAGE BINARY.
      *               Byte count of the size of the AttrValue parameter
       77 ATTRVALUELEN      PIC S9(9) USAGE BINARY.
      *               Attribute value (STORAGE→ HSTRUCT)
       77 ATTRVALUE         PIC S9(9) USAGE BINARY.
      *               Options
       77 OPTIONS           PIC S9(9) USAGE BINARY.
      *               Length of presentation parameter value passed back
       77 RETLEN            PIC S9(9) USAGE BINARY.
```

WinQueryProfileData - WMQPDA

```
CALL "WMQPDA" USING    HAB, LENGTH-1, STRING-1, LENGTH-2, STRING-2, VALUE-1, SIZE-1,
                       SUCCESS.

*          Anchor-block handle
 77 HAB       PIC S9(9) USAGE BINARY.
*          Application name
 77 LENGTH-1  PIC S9(9) USAGE BINARY.
 77 STRING-1  PIC X(length-1).
*          Key name
 77 LENGTH-2  PIC S9(9) USAGE BINARY.
 77 STRING-2  PIC X(length-2).
*          Value data (STORAGE→ HSTRUCT)
 77 VALUE-1   PIC S9(9) USAGE BINARY.
*          Size of value data
 77 SIZE-1    PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinQueryProfileInt - WMQPIN

```
CALL "WMQPIN" USING    HAB, LENGTH-1, STRING-1, LENGTH-2, STRING-2, DEFAULT,
                       REQUIREDINTEGER.

*                  Anchor-block handle
 77 HAB                PIC S9(9) USAGE BINARY.
*                  Application name
 77 LENGTH-1           PIC S9(9) USAGE BINARY.
 77 STRING-1           PIC X(length-1).
*                  Key name
 77 LENGTH-2           PIC S9(9) USAGE BINARY.
 77 STRING-2           PIC X(length-2).
*                  Default value
 77 DEFAULT            PIC S9(9) USAGE BINARY.
*                  Key value specified in the intialization file
 77 REQUIREDINTEGER    PIC S9(9) USAGE BINARY.
```

WinQueryProfileSize - WMQPSZ

```
CALL "WMQPSZ" USING    HAB, LENGTH-1, STRING-1, LENGTH-2, STRING-2, VALUE-1, RETCODE.

*          Anchor-block handle
 77 HAB       PIC S9(9) USAGE BINARY.
*          Application name
 77 LENGTH-1  PIC S9(9) USAGE BINARY.
 77 STRING-1  PIC X(length-1).
*          Key name
 77 LENGTH-2  PIC S9(9) USAGE BINARY.
 77 STRING-2  PIC X(length-2).
*          Data length
 77 VALUE-1   PIC S9(9) USAGE BINARY.
*          Success indicator
 77 RETCODE   PIC S9(9) USAGE BINARY.
```

WinQueryProfileString - WMQPST

```
       CALL "WMQPST" USING    HAB, LENGTH-1, STRING-1, LENGTH-2, STRING-2, LENGTH-3, STRING-3,
                              PROFILESTRING, MAXPSTRING, PSTRING.

      *                 Anchor-block handle
       77 HAB              PIC S9(9) USAGE BINARY.
      *                 Application name
       77 LENGTH-1         PIC S9(9) USAGE BINARY.
       77 STRING-1         PIC X(length-1).
      *                 Key name
       77 LENGTH-2         PIC S9(9) USAGE BINARY.
       77 STRING-2         PIC X(length-2).
      *                 Default string
       77 LENGTH-3         PIC S9(9) USAGE BINARY.
       77 STRING-3         PIC X(length-3).
      *                 Profile string (STORAGE→ HSTRUCT)
       77 PROFILESTRING    PIC S9(9) USAGE BINARY.
      *                 Maximum number
       77 MAXPSTRING       PIC S9(9) USAGE BINARY.
      *                 Actual number
       77 PSTRING          PIC S9(9) USAGE BINARY.
```

WinQueryProgramTitles - WMQPTI

```
       CALL "WMQPTI" USING    HAB, GROUP-1, BUFFER-ARRAY, BUFFERLEN, TOTAL, SUCCESS.

      *              Anchor-block handle
       77 HAB            PIC S9(9) USAGE BINARY.
      *              Handle of the program group whose information is to be returned
       77 GROUP-1        PIC S9(9) USAGE BINARY.
      *              Program information buffer
       01 BUFFER-ARRAY.
          02 BUFFER OCCURS total TIMES.
             COPY PROGENTR.
      *              Buffer length
       77 BUFFERLEN      PIC S9(9) USAGE BINARY.
      *              Total number of structures
       77 TOTAL          PIC S9(9) USAGE BINARY.
      *              Success indicator
       77 SUCCESS        PIC S9(9) USAGE BINARY.
```

WinQueryQueueInfo - WMQQI

```
       CALL "WMQQI" USING    HMQ, MQINFO, COPIED, SUCCESS.

      *            Queue handle
       77 HMQ           PIC S9(9) USAGE BINARY.
      *            Message queue information structure to contain the queue information
       01 MQINFO.
          COPY MQINF.
      *            Size of message queue information structure that is provided (in bytes)
       77 COPIED        PIC S9(9) USAGE BINARY.
      *            Success indicator
       77 SUCCESS       PIC S9(9) USAGE BINARY.
```

WinQueryQueueStatus - WCQSTA

```
       CALL "WCQSTA" USING    DESKTOP, STATUS-1.

      *             Desktop-window handle
       77 DESKTOP       PIC S9(9) USAGE BINARY.
      *             Status information
       77 STATUS-1      PIC S9(9) USAGE BINARY.
```

WinQuerySessionTitle - WMQSTI

```
CALL "WMQSTI" USING   HAB, SESSION, LENGTH-1, STRING-1, TITLELEN, RETCODE.

*           Anchor-block handle
 77 HAB       PIC S9(9) USAGE BINARY.
*           IBM Operating System/2 session identity of application whose title is requested
 77 SESSION   PIC S9(9) USAGE BINARY.
*           Task title ( LENGTH-1 is result string length)
 77 LENGTH-1  PIC S9(9) USAGE BINARY.
 77 STRING-1  PIC X(titlelen).
*           Maximum length of data returnable in bytes
 77 TITLELEN  PIC S9(9) USAGE BINARY.
*           Return code
 77 RETCODE   PIC S9(9) USAGE BINARY.
```

WinQuerySwitchEntry - WMQSEN

```
CALL "WMQSEN" USING    SWITCH, SWITCHDATA, RETCODE.

*            Handle to the task list entry
 77 SWITCH       PIC S9(9) USAGE BINARY.
*            Switch control data
 01 SWITCHDATA.
    COPY SWCNTRL.
*            Return code
 77 RETCODE      PIC S9(9) USAGE BINARY.
```

WinQuerySwitchHandle - WMQSHD

```
CALL "WMQSHD" USING    HWND, PROCESS, SWITCH.

*          Window handle of an application
 77 HWND      PIC S9(9) USAGE BINARY.
*          Process identity of the application
 77 PROCESS   PIC S9(9) USAGE BINARY.
*          Switch list handle for the specified application
 77 SWITCH    PIC S9(9) USAGE BINARY.
```

WinQuerySwitchList - WMQSLI

```
CALL "WMQSLI" USING   HAB, SWITCHENTRIES, DATALENGTH, COUNT-1.

*               Anchor-block handle
 77 HAB            PIC S9(9) USAGE BINARY.
*               Switch entries block
 01 SWITCHENTRIES.
    COPY SWBLOCK REPLACING SWBLOCK-DIM BY n.
*               Maximum length of data returnable in bytes
 77 DATALENGTH      PIC S9(9) USAGE BINARY.
*               Total number of switch list entries present in the system
 77 COUNT-1         PIC S9(9) USAGE BINARY.
```

WinQuerySysColor - WIQSCO

```
CALL "WIQSCO" USING   DESKTOP, COLOR, RESERVED, RGBCOLOR.

*           Desktop-window handle
 77 DESKTOP   PIC S9(9) USAGE BINARY.
*           System color-index value
 77 COLOR     PIC S9(9) USAGE BINARY.
*           Reserved
 77 RESERVED  PIC S9(9) USAGE BINARY.
*           RGB value
 77 RGBCOLOR  PIC S9(9) USAGE BINARY.
```

WinQuerySysModalWindow - WIQSMW

```
CALL "WIQSMW" USING    DESKTOP, LOCK-1, SYSMODAL.

*           Desktop-window handle
 77 DESKTOP     PIC S9(9) USAGE BINARY.
*           Window's lock-state indicator
 77 LOCK-1      PIC S9(9) USAGE BINARY.
*           Handle of system modal window
 77 SYSMODAL    PIC S9(9) USAGE BINARY.
```

WinQuerySysPointer - WMQSPT

```
CALL "WMQSPT" USING    DESKTOP, IDENTIFIER, COPY-1, POINTER-1.

*            Desktop-window handle
 77 DESKTOP      PIC S9(9) USAGE BINARY.
*            System-pointer identifier
 77 IDENTIFIER   PIC S9(9) USAGE BINARY.
*            Copy indicator
 77 COPY-1       PIC S9(9) USAGE BINARY.
*            Pointer handle
 77 POINTER-1    PIC S9(9) USAGE BINARY.
```

WinQuerySysValue - WMQSYS

```
CALL "WMQSYS" USING    DESKTOP, VALUEID, VALUE-1.

*           Desktop-window handle
 77 DESKTOP     PIC S9(9) USAGE BINARY.
*           System-value identity
 77 VALUEID     PIC S9(9) USAGE BINARY.
*           System value
 77 VALUE-1     PIC S9(9) USAGE BINARY.
```

WinQuerySystemAtomTable - WMQSAT

```
CALL "WMQSAT" USING    ATOMTBL.

*           System atom-table handle
 77 ATOMTBL     PIC S9(9) USAGE BINARY.
```

WinQueryTaskSizePos - WMQTSP

```
CALL "WMQTSP" USING    HAB, SCREENGROUP, POSITIONDATA, RETCODE.

*              Anchor-block handle
 77 HAB           PIC S9(9) USAGE BINARY.
*              Screen group
 77 SCREENGROUP     PIC S9(9) USAGE BINARY.
*              Window position and size data
 01 POSITIONDATA.
    COPY SWP.
*              Return code
 77 RETCODE         PIC S9(9) USAGE BINARY.
```

WinQueryTaskTitle - WMQTTI

```
CALL "WMQTTI" USING    SESSION, LENGTH-1, STRING-1, TITLELEN, RETCODE.

*           Session identity of application whose title is requested
 77 SESSION    PIC S9(9) USAGE BINARY.
*           Task title ( LENGTH-1 is result string length)
 77 LENGTH-1   PIC S9(9) USAGE BINARY.
 77 STRING-1   PIC X(titlelen).
*           Maximum length of data returnable in bytes
 77 TITLELEN   PIC S9(9) USAGE BINARY.
*           Return code
 77 RETCODE    PIC S9(9) USAGE BINARY.
```

WinQueryUpdateRect - WIQURC

```
       CALL "WIQURC" USING    HWND, XLEFT, YBOTTOM, XRIGHT, YTOP, SUCCESS.

      *          Handle of window whose update rectangle is to be queried
       77 HWND        PIC S9(9) USAGE BINARY.
      *          Update region that bounds the rectangle (in window coordinates)
       77 XLEFT       PIC S9(9) USAGE BINARY.
       77 YBOTTOM     PIC S9(9) USAGE BINARY.
       77 XRIGHT      PIC S9(9) USAGE BINARY.
       77 YTOP        PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinQueryUpdateRegion - WIQURG

```
       CALL "WIQURG" USING    HWND, HRGN, COMPLEXITY.

      *             Handle of window whose update region is to be queried
       77 HWND          PIC S9(9) USAGE BINARY.
      *             Handle of the window's update region
       77 HRGN          PIC S9(9) USAGE BINARY.
      *             Complexity of resulting region/error indicator
       77 COMPLEXITY    PIC S9(9) USAGE BINARY.
```

WinQueryValue - WUQVAL

```
       CALL "WUQVAL" USING    HAB, VALUE-1, COUNT-1, TYPES-ARRAY, DATA-1-ARRAY, SUCCESS.

      *          Anchor-block handle
       77 HAB       PIC S9(9) USAGE BINARY.
      *          4-byte integer to be decomposed
       77 VALUE-1   PIC S9(9) USAGE BINARY.
      *          Number of elements
       77 COUNT-1   PIC S9(9) USAGE BINARY.
      *          Data types of the components of the value to be decomposed
       01 TYPES-ARRAY.
          02 TYPES  PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
      *          Data components extracted from the value to be decomposed
       01 DATA-1-ARRAY.
          02 DATA-1 PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
      *          Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinQueryVersion - WMQVER

```
       CALL "WMQVER" USING    HAB, SYSINF.

      *         Anchor-block handle
       77 HAB      PIC S9(9) USAGE BINARY.
      *         System information within which the application is operating
       77 SYSINF   PIC S9(9) USAGE BINARY.
```

WinQueryWindow - WIQWIN

```
       CALL "WIQWIN" USING   HWND, CODE-1, LOCK-1, RELATED.

      *          Handle of window to query
       77 HWND       PIC S9(9) USAGE BINARY.
      *          Type of window information
       77 CODE-1     PIC S9(9) USAGE BINARY.
      *          Lock control
       77 LOCK-1     PIC S9(9) USAGE BINARY.
      *          Window handle
       77 RELATED    PIC S9(9) USAGE BINARY.
```

WinQueryWindowDC - WIQWDC

```
       CALL "WIQWDC" USING    HWND, HDC.

    *         Window handle
     77 HWND     PIC S9(9) USAGE BINARY.
    *         Device-context handle
     77 HDC      PIC S9(9) USAGE BINARY.
```

WinQueryWindowLockCount - WIQWLC

```
       CALL "WIQWLC" USING    HWND, LOCK-1.

    *          Window handle
     77 HWND      PIC S9(9) USAGE BINARY.
    *          Window-lock count
     77 LOCK-1    PIC S9(9) USAGE BINARY.
```

WinQueryWindowPos - WIQPOS

```
       CALL "WIQPOS" USING    HWND, SWP, SUCCESS.

    *           Window handle
     77 HWND        PIC S9(9) USAGE BINARY.
    *           SWP structure
     01 SWP.
        COPY SWP.
    *           Success indicator
     77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinQueryWindowProcess - WIQPRO

```
       CALL "WIQPRO" USING    HWND, PID, TID, SUCCESS.

    *           Window handle
     77 HWND        PIC S9(9) USAGE BINARY.
    *           Process identity of the thread that created the window
     77 PID         PIC S9(9) USAGE BINARY.
    *           Thread identity of the thread that created the window
     77 TID         PIC S9(9) USAGE BINARY.
    *           Success indicator
     77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinQueryWindowPtr - WIQWPT

```
       CALL "WIQWPT" USING    HWND, B, P.

    *         Window handle
     77 HWND     PIC S9(9) USAGE BINARY.
    *         Index
     77 B        PIC S9(9) USAGE BINARY.
    *         Pointer value (STORAGE→ HSTRUCT)
     77 P        PIC S9(9) USAGE BINARY.
```

WinQueryWindowRect - WIQRCT

```
       CALL "WIQRCT" USING    HWND, XLEFT, YBOTTOM, XRIGHT, YTOP, SUCCESS.

    *           Window handle
     77 HWND        PIC S9(9) USAGE BINARY.
    *           Window rectangle
     77 XLEFT       PIC S9(9) USAGE BINARY.
     77 YBOTTOM     PIC S9(9) USAGE BINARY.
     77 XRIGHT      PIC S9(9) USAGE BINARY.
     77 YTOP        PIC S9(9) USAGE BINARY.
    *           Rectangle-returned indicator
     77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinQueryWindowText - WIQTXT

```
       CALL "WIQTXT" USING   HWND, LENGTH-1, BUFFER, RETLEN.

      *           Window handle
       77 HWND       PIC S9(9) USAGE BINARY.
      *           Length
       77 LENGTH-1   PIC S9(9) USAGE BINARY.
      *           Window text ( RETLEN is result string length)
       77 BUFFER     PIC X(length-1).
      *           Length of returned text
       77 RETLEN     PIC S9(9) USAGE BINARY.
```

WinQueryWindowTextLength - WIQTXL

```
       CALL "WIQTXL" USING   HWND, RETLEN.

      *         Window handle
       77 HWND     PIC S9(9) USAGE BINARY.
      *         Length of the window text
       77 RETLEN   PIC S9(9) USAGE BINARY.
```

WinQueryWindowULong - WIQWUL

```
       CALL "WIQWUL" USING    HWND, B, VALUE-1.

      *          Handle of window to be queried
       77 HWND      PIC S9(9) USAGE BINARY.
      *          Index
       77 B         PIC S9(9) USAGE BINARY.
      *          Value contained in the window word
       77 VALUE-1   PIC S9(9) USAGE BINARY.
```

WinQueryWindowUShort - WIQWUS

```
       CALL "WIQWUS" USING    HWND, B, VALUE-1.

      *          Handle of window to be queried
       77 HWND      PIC S9(9) USAGE BINARY.
      *          Index
       77 B         PIC S9(9) USAGE BINARY.
      *          Value contained in the indicated window word
       77 VALUE-1   PIC S9(9) USAGE BINARY.
```

WinRegisterClass - WMRCL

```
       CALL "WMRCL" USING    HAB, LENGTH-1, STRING-1, WNDPROC, CLASSSTYLE, EXTRA, REGISTERED.

      *             Anchor-block handle
       77 HAB           PIC S9(9) USAGE BINARY.
      *             Window-class name
       77 LENGTH-1      PIC S9(9) USAGE BINARY.
       77 STRING-1      PIC X(length-1).
      *             Window-procedure identifier
       77 WNDPROC       PIC S9(9) USAGE BINARY.
      *             Default-window style
       77 CLASSSTYLE    PIC S9(9) USAGE BINARY.
      *             Reserved storage
       77 EXTRA         PIC S9(9) USAGE BINARY.
      *             Window-class-registration indicator
       77 REGISTERED    PIC S9(9) USAGE BINARY.
```

WinRegisterUserDatatype - WMRUD

```
CALL "WMRUD" USING    HAB, DATATYPE, COUNT-1, TYPES-ARRAY, SUCCESS.

*           Anchor-block handle
 77 HAB         PIC S9(9) USAGE BINARY.
*           Data type code to be defined
 77 DATATYPE    PIC S9(9) USAGE BINARY.
*           Number of elements
 77 COUNT-1     PIC S9(9) USAGE BINARY.
*           Data type codes of structure components
 01 TYPES-ARRAY.
    02 TYPES    PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
*           Success indicator
 77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinRegisterUserMsg - WMRUM

```
CALL "WMRUM" USING    HAB, MSGID, TYPE1, DIR1, TYPE2, DIR2, TYPER, SUCCESS.

*          Anchor-block handle
 77 HAB        PIC S9(9) USAGE BINARY.
*          Message identifier
 77 MSGID      PIC S9(9) USAGE BINARY.
*          Datatype of message-parameter 1
 77 TYPE1      PIC S9(9) USAGE BINARY.
*          Direction of message-parameter 1
 77 DIR1       PIC S9(9) USAGE BINARY.
*          Datatype of message-parameter 2
 77 TYPE2      PIC S9(9) USAGE BINARY.
*          Direction of message-parameter 2
 77 DIR2       PIC S9(9) USAGE BINARY.
*          Datatype of message reply
 77 TYPER      PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinRegisterWindowDestroy - WMREWD

```
CALL "WMREWD" USING    HWND, REGISTER, SUCCESS.

*           Window handle
 77 HWND        PIC S9(9) USAGE BINARY.
*           Registration indicator
 77 REGISTER    PIC S9(9) USAGE BINARY.
*           Success indicator
 77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinReleaseHook - WMRHK

```
CALL "WMRHK" USING    HAB, HMQ, HOOK, ADDRESS, MODULE, SUCCESS.

*           Anchor-block handle
 77 HAB         PIC S9(9) USAGE BINARY.
*           Handle of message queue from which the hook is to be released
 77 HMQ         PIC S9(9) USAGE BINARY.
*           Type of hook chain
 77 HOOK        PIC S9(9) USAGE BINARY.
*           Address of the hook routine
 77 ADDRESS     PIC S9(9) USAGE BINARY.
*           Module handle
 77 MODULE      PIC S9(9) USAGE BINARY.
*           Success indicator
 77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinReleasePS - WPREPS

```
       CALL "WPREPS" USING    HPS, SUCCESS.

    *          Handle of the cache presentation space to release
     77 HPS        PIC S9(9) USAGE BINARY.
    *          Success indicator
     77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinRemovePresParam - WMRPP

```
       CALL "WMRPP" USING    HWND, ATTRTYPE, SUCCESS.

    *           Window handle
     77 HWND        PIC S9(9) USAGE BINARY.
    *           Attribute type identity
     77 ATTRTYPE    PIC S9(9) USAGE BINARY.
    *           Success indicator
     77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinRemoveSwitchEntry - WMRSWE

```
       CALL "WMRSWE" USING     SWITCH, RETCODE.

    *          Switch-list (task-list) entry handle
     77 SWITCH    PIC S9(9) USAGE BINARY.
    *          Success indicator
     77 RETCODE   PIC S9(9) USAGE BINARY.
```

WinScrollWindow - WISCRL

```
       CALL "WISCRL" USING   HWND, DX, DY, XLEFT, YBOTTOM, XRIGHT, YTOP, XLEFT-2, YBOTTOM-2,
                             XRIGHT-2, YTOP-2, UPDATERGN, XLEFT-3, YBOTTOM-3, XRIGHT-3, YTOP-3,
                             OPTIONS, COMPLEXITY.

    *             Window handle
     77 HWND          PIC S9(9) USAGE BINARY.
    *             Amount of horizontal scroll to the right (in device units)
     77 DX            PIC S9(9) USAGE BINARY.
    *             Amount of vertical scroll upward (in device units)
     77 DY            PIC S9(9) USAGE BINARY.
    *             Scroll rectangle
     77 XLEFT          PIC S9(9) USAGE BINARY.
     77 YBOTTOM        PIC S9(9) USAGE BINARY.
     77 XRIGHT         PIC S9(9) USAGE BINARY.
     77 YTOP           PIC S9(9) USAGE BINARY.
    *             Clip rectangle
     77 XLEFT-2        PIC S9(9) USAGE BINARY.
     77 YBOTTOM-2      PIC S9(9) USAGE BINARY.
     77 XRIGHT-2       PIC S9(9) USAGE BINARY.
     77 YTOP-2         PIC S9(9) USAGE BINARY.
    *             Update region
     77 UPDATERGN      PIC S9(9) USAGE BINARY.
    *             Update rectangle
     77 XLEFT-3        PIC S9(9) USAGE BINARY.
     77 YBOTTOM-3      PIC S9(9) USAGE BINARY.
     77 XRIGHT-3       PIC S9(9) USAGE BINARY.
     77 YTOP-3         PIC S9(9) USAGE BINARY.
    *             Scroll options
     77 OPTIONS        PIC S9(9) USAGE BINARY.
    *             Complexity of resulting region/error indicator
     77 COMPLEXITY     PIC S9(9) USAGE BINARY.
```

WinSendDlgItemMsg - WCSDIM

```
       CALL "WCSDIM" USING    DLG, ITEM, MSGID, PARAM1, PARAM2, REPLY.

      *          Parent-window handle
       77 DLG       PIC S9(9) USAGE BINARY.
      *          Identity of the child window
       77 ITEM      PIC S9(9) USAGE BINARY.
      *          Message identity
       77 MSGID     PIC S9(9) USAGE BINARY.
      *          Message parameter 1 (MPARAM: Can also be HSTRUCT or COMPOSED)
       77 PARAM1    PIC S9(9) USAGE BINARY.
      *          Message parameter 2 (MPARAM: Can also be HSTRUCT or COMPOSED)
       77 PARAM2    PIC S9(9) USAGE BINARY.
      *          Message-return data (MRESULT: Can also be HSTRUCT or COMPOSED)
       77 REPLY     PIC S9(9) USAGE BINARY.
```

WinSendMsg - WMSEND

```
       CALL "WMSEND" USING    HWND, MSGID, PARAM1, PARAM2, REPLY.

      *          Window handle
       77 HWND      PIC S9(9) USAGE BINARY.
      *          Message identity
       77 MSGID     PIC S9(9) USAGE BINARY.
      *          Parameter 1 (MPARAM: Can also be HSTRUCT or COMPOSED)
       77 PARAM1    PIC S9(9) USAGE BINARY.
      *          Parameter 2 (MPARAM: Can also be HSTRUCT or COMPOSED)
       77 PARAM2    PIC S9(9) USAGE BINARY.
      *          Message-return data (MRESULT: Can also be HSTRUCT or COMPOSED)
       77 REPLY     PIC S9(9) USAGE BINARY.
```

WinSetAccelTable - WMSACC

```
       CALL "WMSACC" USING    HAB, ACCEL, FRAME, SUCCESS.

      *          Anchor-block handle
       77 HAB       PIC S9(9) USAGE BINARY.
      *          Accelerator-table handle
       77 ACCEL     PIC S9(9) USAGE BINARY.
      *          Frame-window handle
       77 FRAME     PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinSetActiveWindow - WMSACT

```
       CALL "WMSACT" USING    DESKTOP, HWND, SUCCESS.

      *          Desktop-window handle
       77 DESKTOP    PIC S9(9) USAGE BINARY.
      *          Window handle
       77 HWND       PIC S9(9) USAGE BINARY.
      *          Active-window-set indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinSetBits - WUSBIT

```
       CALL "WUSBIT" USING   HAB, INT, DATA-1-ARRAY, SUCCESS.

      *          Anchor-block handle
       77 HAB       PIC S9(9) USAGE BINARY.
      *          Integer whose bits are to be modified
       77 INT       PIC S9(9) USAGE BINARY.
      *          Data used to modify the integer
       01 DATA-1-ARRAY.
          02 DATA-1  PIC S9(9) USAGE BINARY OCCURS 32 TIMES.
      *          Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinSetBitsUnderMask - WUSBM

```
       CALL "WUSBM" USING    HAB, INT, MASK, BITVAL, SUCCESS.

      *          Anchor-block handle
       77 HAB        PIC S9(9) USAGE BINARY.
      *          Integer whose bits are to be modified
       77 INT        PIC S9(9) USAGE BINARY.
      *          Mask identifying the bits to be modified
       77 MASK       PIC S9(9) USAGE BINARY.
      *          Bit value to be used to modify the integer
       77 BITVAL     PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinSetCapture - WMSCAP

```
       CALL "WMSCAP" USING    DESKTOP, HWND, SUCCESS.

      *           Desktop-window handle, or HWND_DESKTOP
       77 DESKTOP    PIC S9(9) USAGE BINARY.
      *           Handle of the window that is to receive all pointing device messages
       77 HWND       PIC S9(9) USAGE BINARY.
      *           Success indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinSetClassMsgInterest - WMSCMI

```
       CALL "WMSCMI" USING    HAB, LENGTH-1, STRING-1, MSGCLASS, CONTROL-1, SUCCESS.

      *            Anchor-block handle
       77 HAB          PIC S9(9) USAGE BINARY.
      *            Window-class name
       77 LENGTH-1     PIC S9(9) USAGE BINARY.
       77 STRING-1     PIC X(length-1).
      *            Message class to have interest level set
       77 MSGCLASS     PIC S9(9) USAGE BINARY.
      *            Interest identifier for the message class
       77 CONTROL-1    PIC S9(9) USAGE BINARY.
      *            Interest-changed indicator
       77 SUCCESS      PIC S9(9) USAGE BINARY.
```

WinSetClipbrdData - WISCBD

```
       CALL "WISCBD" USING    HAB, H, FMT, FMTINFO, DATAPLACED.

      *             Anchor-block handle
       77 HAB           PIC S9(9) USAGE BINARY.
      *             Handle
       77 H             PIC S9(9) USAGE BINARY.
      *             Format
       77 FMT           PIC S9(9) USAGE BINARY.
      *             Information
       77 FMTINFO       PIC S9(9) USAGE BINARY.
      *             Data-placed indicator
       77 DATAPLACED    PIC S9(9) USAGE BINARY.
```

WinSetClipbrdOwner - WISCBO

```
       CALL "WISCBO" USING    HAB, HWND, SUCCESS.

      *          Anchor-block handle
       77 HAB        PIC S9(9) USAGE BINARY.
      *          Window handle of the new clipboard owner
       77 HWND       PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinSetClipbrdViewer - WISCBV

```
       CALL "WISCBV" USING   HAB, NEWCLIPVIEWER, SUCCESS.

      *                Anchor-block handle
       77 HAB              PIC S9(9) USAGE BINARY.
      *                Window handle of the new clipboard viewer
       77 NEWCLIPVIEWER    PIC S9(9) USAGE BINARY.
      *                Success indicator
       77 SUCCESS          PIC S9(9) USAGE BINARY.
```

WinSetCp - WMSECP

```
       CALL "WMSECP" USING    HMQ, CODEPAGE, SUCCESS.

      *           Message-queue handle
       77 HMQ          PIC S9(9) USAGE BINARY.
      *           Code page
       77 CODEPAGE     PIC S9(9) USAGE BINARY.
      *           Success indicator
       77 SUCCESS      PIC S9(9) USAGE BINARY.
```

WinSetDlgItemShort - WCSDI

```
       CALL "WCSDI" USING   DLG, ITEM, VALUE-1, SIGNED, SUCCESS.

      *          Parent-window handle
       77 DLG       PIC S9(9) USAGE BINARY.
      *          Identity of the child window whose text is to be changed
       77 ITEM      PIC S9(9) USAGE BINARY.
      *          Integer value used to generate the dialog item text
       77 VALUE-1   PIC S9(9) USAGE BINARY.
      *          Sign indicator
       77 SIGNED    PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinSetDlgItemText - WMSDIT

```
       CALL "WMSDIT" USING   DLG, ITEM, LENGTH-1, STRING-1, SUCCESS.

      *           Parent-window handle
       77 DLG         PIC S9(9) USAGE BINARY.
      *           Identity of the child window whose text is to be set
       77 ITEM        PIC S9(9) USAGE BINARY.
      *           Source string
       77 LENGTH-1    PIC S9(9) USAGE BINARY.
       77 STRING-1    PIC X(length-1).
      *           Success indicator
       77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinSetFocus - WMSFOC

```
       CALL "WMSFOC" USING    DESKTOP, NEWFOCUS, SUCCESS.

      *           Desktop-window handle
       77 DESKTOP     PIC S9(9) USAGE BINARY.
      *           Window handle to receive the focus
       77 NEWFOCUS    PIC S9(9) USAGE BINARY.
      *           Success indicator
       77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinSetHook - WMSHOO

```
       CALL "WMSHOO" USING     HAB, HMQ, HOOKTYPE, HOOKPROC, MODULE, SUCCESS.

      *           Anchor-block handle
       77 HAB         PIC S9(9) USAGE BINARY.
      *           Queue identity
       77 HMQ         PIC S9(9) USAGE BINARY.
      *           Hook chain type
       77 HOOKTYPE    PIC S9(9) USAGE BINARY.
      *           Address of the application hook procedure
       77 HOOKPROC    PIC S9(9) USAGE BINARY.
      *           Resource identity
       77 MODULE      PIC S9(9) USAGE BINARY.
      *           Success indicator
       77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinSetKeyboardStateTable - WMSKST

```
       CALL "WMSKST" USING    DESKTOP, KEYSTATETABLE-ARRAY, SET-1, SUCCESS.

      *               Desktop-window handle
       77 DESKTOP          PIC S9(9) USAGE BINARY.
      *               Key state table
       01 KEYSTATETABLE-ARRAY.
          02 KEYSTATETABLE  PIC X OCCURS 256 TIMES.
      *               Set indicator
       77 SET-1            PIC S9(9) USAGE BINARY.
      *               Success indicator
       77 SUCCESS          PIC S9(9) USAGE BINARY.
```

WinSetMsgInterest - WMMINT

```
       CALL "WMMINT" USING    HWND, MSGCLASS, CONTROL-1, SUCCESS.

      *           Window handle
       77 HWND         PIC S9(9) USAGE BINARY.
      *           Message class to have interest level set
       77 MSGCLASS     PIC S9(9) USAGE BINARY.
      *           Interest-identifier for the message class
       77 CONTROL-1    PIC S9(9) USAGE BINARY.
      *           Interest-changed indicator
       77 SUCCESS      PIC S9(9) USAGE BINARY.
```

WinSetMsgMode - WMSMM

```
       CALL "WMSMM" USING     HAB, LENGTH-1, STRING-1, CONTROL-1, SUCCESS.

      *           Anchor block handle
       77 HAB          PIC S9(9) USAGE BINARY.
      *           Window class name
       77 LENGTH-1     PIC S9(9) USAGE BINARY.
       77 STRING-1     PIC X(length-1).
      *           Message mode identifier
       77 CONTROL-1    PIC S9(9) USAGE BINARY.
      *           Message delay indicator
       77 SUCCESS      PIC S9(9) USAGE BINARY.
```

WinSetMultWindowPos - WISMPS

```
CALL "WISMPS" USING   HAB, SWP-ARRAY, COUNT-1, SUCCESS.

*          Anchor-block handle
 77 HAB       PIC S9(9) USAGE BINARY.
*          Array
 01 SWP-ARRAY.
    02 SWP OCCURS count-1 TIMES.
       COPY SWP.
*          Window count
 77 COUNT-1    PIC S9(9) USAGE BINARY.
*          Positioning success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinSetOwner - WISOWN

```
CALL "WISOWN" USING    HWND, NEWOWNER, SUCCESS.

*          Window handle whose owner window is to be changed
 77 HWND          PIC S9(9) USAGE BINARY.
*          Handle of the new owner
 77 NEWOWNER      PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS       PIC S9(9) USAGE BINARY.
```

WinSetParent - WISPAR

```
CALL "WISPAR" USING   HWND, NEWPARENT, REDRAW, SUCCESS.

*           Window handle
 77 HWND          PIC S9(9) USAGE BINARY.
*           New parent window handle
 77 NEWPARENT     PIC S9(9) USAGE BINARY.
*           Redraw indicator
 77 REDRAW        PIC S9(9) USAGE BINARY.
*           Parent-changed indicator
 77 SUCCESS       PIC S9(9) USAGE BINARY.
```

WinSetPointer - WMSPTR

```
CALL "WMSPTR" USING    DESKTOP, NEWPOINTER, SUCCESS.

*            Desktop-window handle
 77 DESKTOP       PIC S9(9) USAGE BINARY.
*            New pointer handle
 77 NEWPOINTER    PIC S9(9) USAGE BINARY.
*            Pointer-updated indicator
 77 SUCCESS       PIC S9(9) USAGE BINARY.
```

WinSetPointerPos - WMSPTP

```
CALL "WMSPTP" USING    DESKTOP, X, Y, SUCCESS.

*          Desktop-window handle
 77 DESKTOP    PIC S9(9) USAGE BINARY.
*          x position of pointer in screen coordinates
 77 X          PIC S9(9) USAGE BINARY.
*          y position of pointer in screen coordinates
 77 Y          PIC S9(9) USAGE BINARY.
*          Pointer position updated indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinSetPresParam - WMSPP

```
       CALL "WMSPP" USING    HWND, ATTRTYPE, ATTRVALUELEN, ATTRVALUE, SUCCESS.

      *              Window handle
       77 HWND            PIC S9(9) USAGE BINARY.
      *              Attribute type identity
       77 ATTRTYPE        PIC S9(9) USAGE BINARY.
      *              Byte count of the data passed in the AttrValue parameter
       77 ATTRVALUELEN    PIC S9(9) USAGE BINARY.
      *              Attribute value (STORAGE→ HSTRUCT)
       77 ATTRVALUE       PIC S9(9) USAGE BINARY.
      *              Success indicator
       77 SUCCESS         PIC S9(9) USAGE BINARY.
```

WinSetRect - WISREC

```
       CALL "WISREC" USING   HAB, XLEFT, YBOTTOM, XRIGHT, YTOP, LEFT-1, BOTTOM-1, RIGHT-1,
                             TOP-1, SUCCESS.

      *           Anchor-block handle
       77 HAB         PIC S9(9) USAGE BINARY.
      *           Rectangle to be updated
       77 XLEFT       PIC S9(9) USAGE BINARY.
       77 YBOTTOM     PIC S9(9) USAGE BINARY.
       77 XRIGHT      PIC S9(9) USAGE BINARY.
       77 YTOP        PIC S9(9) USAGE BINARY.
      *           Left edge of rectangle
       77 LEFT-1      PIC S9(9) USAGE BINARY.
      *           Bottom edge of rectangle
       77 BOTTOM-1    PIC S9(9) USAGE BINARY.
      *           Right edge of rectangle
       77 RIGHT-1     PIC S9(9) USAGE BINARY.
      *           Top edge of rectangle
       77 TOP-1       PIC S9(9) USAGE BINARY.
      *           Success indicator
       77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinSetRectEmpty - WISRE

```
       CALL "WISRE" USING   HAB, XLEFT, YBOTTOM, XRIGHT, YTOP, SUCCESS.

      *           Anchor-block handle
       77 HAB         PIC S9(9) USAGE BINARY.
      *           Rectangle to be set empty
       77 XLEFT       PIC S9(9) USAGE BINARY.
       77 YBOTTOM     PIC S9(9) USAGE BINARY.
       77 XRIGHT      PIC S9(9) USAGE BINARY.
       77 YTOP        PIC S9(9) USAGE BINARY.
      *           Success indicator
       77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinSetSynchroMode - WMSSM

```
       CALL "WMSSM" USING    HAB, MODE-1, SUCCESS.

      *           Anchor-block handle
       77 HAB         PIC S9(9) USAGE BINARY.
      *           Synchronization mode
       77 MODE-1      PIC S9(9) USAGE BINARY.
      *           Success indicator
       77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinSetSysColors - WISCOL

```
       CALL "WISCOL" USING   DESKTOP, OPTIONS, FORMAT, START-1, TABLEN, TABLE-1-ARRAY, SUCCESS.

      *          Desktop-window handle
       77 DESKTOP    PIC S9(9) USAGE BINARY.
      *          Options
       77 OPTIONS    PIC S9(9) USAGE BINARY.
      *          Format of entries in the table, as follows
       77 FORMAT     PIC S9(9) USAGE BINARY.
      *          Starting system color index
       77 START-1    PIC S9(9) USAGE BINARY.
      *          Number of elements
       77 TABLEN     PIC S9(9) USAGE BINARY.
      *          Table
       01 TABLE-1-ARRAY.
          02 TABLE-1  PIC S9(9) USAGE BINARY OCCURS tablen TIMES.
      *          Success indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinSetSysModalWindow - WISSMW

```
       CALL "WISSMW" USING    DESKTOP, HWND, SUCCESS.

      *          Desktop-window handle, or HWND_DESKTOP
       77 DESKTOP    PIC S9(9) USAGE BINARY.
      *          Handle of window to become system-modal window
       77 HWND       PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinSetSysValue - WMSSYS

```
       CALL "WMSSYS" USING    DESKTOP, VALUEID, VALUE-1, SUCCESS.

      *          Desktop-window handle
       77 DESKTOP    PIC S9(9) USAGE BINARY.
      *          System-value identity
       77 VALUEID    PIC S9(9) USAGE BINARY.
      *          System value
       77 VALUE-1    PIC S9(9) USAGE BINARY.
      *          Value-set indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinSetValue - WUSVAL

```
       CALL "WUSVAL" USING    HAB, COUNT-1, TYPES-ARRAY, DATA-1-ARRAY, VALUE-1, SUCCESS.

      *         Anchor-block handle
       77 HAB       PIC S9(9) USAGE BINARY.
      *         Number of elements
       77 COUNT-1   PIC S9(9) USAGE BINARY.
      *         Data types of the components of the value to be composed
       01 TYPES-ARRAY.
          02 TYPES  PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
      *         Data components of the value to be composed
       01 DATA-1-ARRAY.
          02 DATA-1 PIC S9(9) USAGE BINARY OCCURS count-1 TIMES.
      *         4-byte integer
       77 VALUE-1   PIC S9(9) USAGE BINARY.
      *         Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinSetWindowBits - WISWBT

```
       CALL "WISWBT" USING   HWND, B, DATA-1, MASK, SUCCESS.

      *          Window handle
       77 HWND      PIC S9(9) USAGE BINARY.
      *          Zero-based index of the value to be set
       77 B         PIC S9(9) USAGE BINARY.
      *          Bit data to store in the window words
       77 DATA-1    PIC S9(9) USAGE BINARY.
      *          Bits to be written indicator
       77 MASK      PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinSetWindowPos - WISPOS

```
       CALL "WISPOS" USING   HWND, BEHIND, X, Y, CX, CY, OPTIONS, SUCCESS.

      *          Window handle
       77 HWND      PIC S9(9) USAGE BINARY.
      *          Relative window-placement order
       77 BEHIND    PIC S9(9) USAGE BINARY.
      *          Window position, x coordinate
       77 X         PIC S9(9) USAGE BINARY.
      *          Window position, y coordinate
       77 Y         PIC S9(9) USAGE BINARY.
      *          Window size
       77 CX        PIC S9(9) USAGE BINARY.
      *          Window size
       77 CY        PIC S9(9) USAGE BINARY.
      *          Window-positioning options
       77 OPTIONS   PIC S9(9) USAGE BINARY.
      *          Repositioning indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinSetWindowPtr - WISWPT

```
       CALL "WISWPT" USING   HWND, B, P, SUCCESS.

      *          Window handle
       77 HWND      PIC S9(9) USAGE BINARY.
      *          Zero-based index into the window words
       77 B         PIC S9(9) USAGE BINARY.
      *          Pointer value to store in the window words (STORAGE→ HSTRUCT)
       77 P         PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinSetWindowText - WISTXT

```
       CALL "WISTXT" USING   HWND, LENGTH-1, STRING-1, RESULT.

      *           Window handle
       77 HWND      PIC S9(9) USAGE BINARY.
      *           Window text
       77 LENGTH-1  PIC S9(9) USAGE BINARY.
       77 STRING-1  PIC X(length-1).
      *           Text-updated indicator
       77 RESULT    PIC S9(9) USAGE BINARY.
```

WinSetWindowULong - WISWUL

```
CALL "WISWUL" USING   HWND, B, DATA-1, SUCCESS.

*          Window handle
 77 HWND       PIC S9(9) USAGE BINARY.
*          Zero-based index of the value to be set
 77 B          PIC S9(9) USAGE BINARY.
*          Unsigned, long integer value to store in the window words
 77 DATA-1     PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinSetWindowUShort - WISWUS

```
CALL "WISWUS" USING   HWND, B, DATA-1, SUCCESS.

*          Window handle
 77 HWND       PIC S9(9) USAGE BINARY.
*          Zero-based index of the value to be set
 77 B          PIC S9(9) USAGE BINARY.
*          Unsigned, short integer value to store in the window words
 77 DATA-1     PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinShowCursor - WISCUR

```
CALL "WISCUR" USING   HWND, SHOW, SUCCESS.

*          Handle of window to which the cursor belongs
 77 HWND       PIC S9(9) USAGE BINARY.
*          Show indicator
 77 SHOW       PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinShowPointer - WMSHPT

```
CALL "WMSHPT" USING    DESKTOP, SHOW, SUCCESS.

*           Desktop-window handle
 77 DESKTOP     PIC S9(9) USAGE BINARY.
*           Level-update indicator
 77 SHOW        PIC S9(9) USAGE BINARY.
*           Display-level-updated indicator
 77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinShowTrackRect - WISTR

```
CALL "WISTR" USING   HWND, SHOW, SUCCESS.

*          Window handle
 77 HWND       PIC S9(9) USAGE BINARY.
*          Show indicator
 77 SHOW       PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinShowWindow - WISHOW

```
CALL "WISHOW" USING    HWND, NEWVISIBILITY, SUCCESS.

*                Window handle
 77 HWND           PIC S9(9) USAGE BINARY.
*                New visibility state
 77 NEWVISIBILITY  PIC S9(9) USAGE BINARY.
*                Visibility changed indicator
 77 SUCCESS        PIC S9(9) USAGE BINARY.
```

WinStartTimer - WISTAT

```
CALL "WISTAT" USING   HAB, HWND, TIMER, TIMEOUT, RET.

*          Anchor-block handle
 77 HAB       PIC S9(9) USAGE BINARY.
*          Window handle that is part of the timer identification
 77 HWND      PIC S9(9) USAGE BINARY.
*          Timer identifier
 77 TIMER     PIC S9(9) USAGE BINARY.
*          Delay time in milliseconds
 77 TIMEOUT   PIC S9(9) USAGE BINARY.
*          Return code
 77 RET       PIC S9(9) USAGE BINARY.
```

WinStopTimer - WISTOT

```
CALL "WISTOT" USING   HAB, HWND, TIMER, SUCCESS.

*          Anchor-block handle
 77 HAB       PIC S9(9) USAGE BINARY.
*          Window handle
 77 HWND      PIC S9(9) USAGE BINARY.
*          Timer identifier
 77 TIMER     PIC S9(9) USAGE BINARY.
*          Success indicator
 77 SUCCESS   PIC S9(9) USAGE BINARY.
```

WinSubstituteStrings - WUSUBS

```
CALL "WUSUBS" USING    HWND, LENGTH-1, STRING-1, DESTMAX, DEST, DESTRET.

*           Handle of window that processes the call
 77 HWND       PIC S9(9) USAGE BINARY.
*           Source string
 77 LENGTH-1   PIC S9(9) USAGE BINARY.
 77 STRING-1   PIC X(length-1).
*           Maximum number of characters returnable
 77 DESTMAX    PIC S9(9) USAGE BINARY.
*           Resultant string ( DESTRET is result string length)
 77 DEST       PIC X(destmax).
*           Actual number of characters returned
 77 DESTRET    PIC S9(9) USAGE BINARY.
```

WinSubtractRect - WISUBR

```
CALL "WISUBR" USING   HAB, XLEFT, YBOTTOM, XRIGHT, YTOP, XLEFT-2, YBOTTOM-2, XRIGHT-2,
                      YTOP-2, XLEFT-3, YBOTTOM-3, XRIGHT-3, YTOP-3, NONEMPTY.

*            Anchor-block handle
 77 HAB         PIC S9(9) USAGE BINARY.
*            Result
 77 XLEFT       PIC S9(9) USAGE BINARY.
 77 YBOTTOM     PIC S9(9) USAGE BINARY.
 77 XRIGHT      PIC S9(9) USAGE BINARY.
 77 YTOP        PIC S9(9) USAGE BINARY.
*            First source rectangle
 77 XLEFT-2     PIC S9(9) USAGE BINARY.
 77 YBOTTOM-2   PIC S9(9) USAGE BINARY.
 77 XRIGHT-2    PIC S9(9) USAGE BINARY.
 77 YTOP-2      PIC S9(9) USAGE BINARY.
*            Second source rectangle
 77 XLEFT-3     PIC S9(9) USAGE BINARY.
 77 YBOTTOM-3   PIC S9(9) USAGE BINARY.
 77 XRIGHT-3    PIC S9(9) USAGE BINARY.
 77 YTOP-3      PIC S9(9) USAGE BINARY.
*            Not-empty indicator
 77 NONEMPTY    PIC S9(9) USAGE BINARY.
```

WinSwitchToProgram - WMSTP

```
       CALL "WMSTP" USING    SWHANDLE, RETCODE.

    *           Switch list entry handle of program to be activated
     77 SWHANDLE      PIC S9(9) USAGE BINARY.
    *           Return code
     77 RETCODE       PIC S9(9) USAGE BINARY.
```

WinTerminate - WMTERM

```
       CALL "WMTERM" USING     HAB, TERMINATED.

    *            Anchor-block handle
     77 HAB           PIC S9(9) USAGE BINARY.
    *            Termination indicator
     77 TERMINATED    PIC S9(9) USAGE BINARY.
```

WinTerminateApp - WMSTOP

```
       CALL "WMSTOP" USING    HAPP, SUCCESS.

    *          Application handle
     77 HAPP        PIC S9(9) USAGE BINARY.
    *          Success indicator
     77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinTrackRect - WITREC

```
       CALL "WITREC" USING   HWND, HPS, TRACKINFO, SUCCESS.

    *            Window handle where tracking is to take place
     77 HWND          PIC S9(9) USAGE BINARY.
    *            Presentation-space handle
     77 HPS           PIC S9(9) USAGE BINARY.
    *            Track information
     01 TRACKINFO.
        COPY TRACKINF.
    *            Success indicator
     77 SUCCESS       PIC S9(9) USAGE BINARY.
```

WinTranslateAccel - WMTAC

```
       CALL "WMTAC" USING    HAB, HWND, ACCEL, QMSG, SUCCESS.

    *          Anchor-block handle
     77 HAB         PIC S9(9) USAGE BINARY.
    *          Destination window
     77 HWND        PIC S9(9) USAGE BINARY.
    *          Accelerator-table handle
     77 ACCEL       PIC S9(9) USAGE BINARY.
    *          Message to be translated
     01 QMSG.
        COPY QMSG.
    *          Success indicator
     77 SUCCESS     PIC S9(9) USAGE BINARY.
```

WinUnionRect - WIUNRC

```
       CALL "WIUNRC" USING    HAB, XLEFT, YBOTTOM, XRIGHT, YTOP, XLEFT-2, YBOTTOM-2, XRIGHT-2,
                              YTOP-2, XLEFT-3, YBOTTOM-3, XRIGHT-3, YTOP-3, NONEMPTY.

      *            Anchor-block handle
       77 HAB          PIC S9(9) USAGE BINARY.
      *            Bounding rectangle
       77 XLEFT        PIC S9(9) USAGE BINARY.
       77 YBOTTOM      PIC S9(9) USAGE BINARY.
       77 XRIGHT       PIC S9(9) USAGE BINARY.
       77 YTOP         PIC S9(9) USAGE BINARY.
      *            First source rectangle
       77 XLEFT-2      PIC S9(9) USAGE BINARY.
       77 YBOTTOM-2    PIC S9(9) USAGE BINARY.
       77 XRIGHT-2     PIC S9(9) USAGE BINARY.
       77 YTOP-2       PIC S9(9) USAGE BINARY.
      *            Second source rectangle
       77 XLEFT-3      PIC S9(9) USAGE BINARY.
       77 YBOTTOM-3    PIC S9(9) USAGE BINARY.
       77 XRIGHT-3     PIC S9(9) USAGE BINARY.
       77 YTOP-3       PIC S9(9) USAGE BINARY.
      *            Non-empty indicator
       77 NONEMPTY     PIC S9(9) USAGE BINARY.
```

WinUpdateWindow - WIUPDT

```
       CALL "WIUPDT" USING   HWND, SUCCESS.

      *          Window handle
       77 HWND       PIC S9(9) USAGE BINARY.
      *          Window-updated indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinUpper - WUPPER

```
       CALL "WUPPER" USING    HAB, CODEPAGE, COUNTRY, LENGTH-1, STRING-1.

      *           Anchor-block handle
       77 HAB          PIC S9(9) USAGE BINARY.
      *           Code page
       77 CODEPAGE     PIC S9(9) USAGE BINARY.
      *           Country code
       77 COUNTRY      PIC S9(9) USAGE BINARY.
      *           String to be converted to uppercase
       77 LENGTH-1     PIC S9(9) USAGE BINARY.
       77 STRING-1     PIC X(length-1).
```

WinUpperChar - WUPCH

```
       CALL "WUPCH" USING    HAB, CODEPAGE, COUNTRY, INCHAR, OUTCHAR.

      *           Anchor-block handle
       77 HAB          PIC S9(9) USAGE BINARY.
      *           Code page
       77 CODEPAGE     PIC S9(9) USAGE BINARY.
      *           Country code
       77 COUNTRY      PIC S9(9) USAGE BINARY.
      *           Character to be translated to uppercase
       77 INCHAR       PIC S9(9) USAGE BINARY.
      *           Translated character
       77 OUTCHAR      PIC S9(9) USAGE BINARY.
```

WinValidateRect - WIVREC

```
       CALL "WIVREC" USING    HWND, XLEFT, YBOTTOM, XRIGHT, YTOP, INCLUDECLIPPEDCHILDREN,
                              SUCCESS.

      *                       Handle of window whose update region is changed
       77 HWND                     PIC S9(9) USAGE BINARY.
      *                       Rectangle to be subtracted from the window's update region
       77 XLEFT                    PIC S9(9) USAGE BINARY.
       77 YBOTTOM                  PIC S9(9) USAGE BINARY.
       77 XRIGHT                   PIC S9(9) USAGE BINARY.
       77 YTOP                     PIC S9(9) USAGE BINARY.
      *                       Validation-scope indicator
       77 INCLUDECLIPPEDCHILDREN   PIC S9(9) USAGE BINARY.
      *                       Success indicator
       77 SUCCESS                  PIC S9(9) USAGE BINARY.
```

WinValidateRegion - WIVRGN

```
       CALL "WIVRGN" USING    HWND, HRGN, INCLUDECLIPPEDCHILDREN, SUCCESS.

      *                       Handle of window whose update region is changed
       77 HWND                     PIC S9(9) USAGE BINARY.
      *                       Handle of subtracted region
       77 HRGN                     PIC S9(9) USAGE BINARY.
      *                       Validation-scope indicator
       77 INCLUDECLIPPEDCHILDREN   PIC S9(9) USAGE BINARY.
      *                       Success indicator
       77 SUCCESS                  PIC S9(9) USAGE BINARY.
```

WinWaitMsg - WMWAIT

```
       CALL "WMWAIT" USING    HAB, FIRST-1, LAST-1, SUCCESS.

      *          Anchor-block handle
       77 HAB      PIC S9(9) USAGE BINARY.
      *          First message identity
       77 FIRST-1  PIC S9(9) USAGE BINARY.
      *          Last message identity
       77 LAST-1   PIC S9(9) USAGE BINARY.
      *          Success indicator
       77 SUCCESS  PIC S9(9) USAGE BINARY.
```

WinWindowFromDC - WIQHDC

```
       CALL "WIQHDC" USING    HDC, HWND.

      *       Device-context handle
       77 HDC    PIC S9(9) USAGE BINARY.
      *       Window handle
       77 HWND   PIC S9(9) USAGE BINARY.
```

WinWindowFromID - WIQHID

```
       CALL "WIQHID" USING   PARENT, IDENTIFIER, HWND.

      *             Parent-window handle
       77 PARENT       PIC S9(9) USAGE BINARY.
      *             Identity of the child window
       77 IDENTIFIER   PIC S9(9) USAGE BINARY.
      *             Window handle
       77 HWND         PIC S9(9) USAGE BINARY.
```

WinWindowFromPoint - WIWFP

```
       CALL "WIWFP" USING   PARENT, X, Y, ENUMCHILDREN, LOCK-1, FOUND.

      *                Window handle whose child windows are to be tested
       77 PARENT            PIC S9(9) USAGE BINARY.
      *                The point to be tested
       77 X                 PIC S9(9) USAGE BINARY.
       77 Y                 PIC S9(9) USAGE BINARY.
      *                Test control
       77 ENUMCHILDREN      PIC S9(9) USAGE BINARY.
      *                Lock control
       77 LOCK-1            PIC S9(9) USAGE BINARY.
      *                Window handle beneath point
       77 FOUND             PIC S9(9) USAGE BINARY.
```

WinWriteProfileData - WMWPDA

```
       CALL "WMWPDA" USING     HAB, LENGTH-1, STRING-1, LENGTH-2, STRING-2, VALUE-1, SIZE-1,
                               SUCCESS.

      *           Anchor-block handle
       77 HAB        PIC S9(9) USAGE BINARY.
      *           Text string
       77 LENGTH-1   PIC S9(9) USAGE BINARY.
       77 STRING-1   PIC X(length-1).
      *           Text string
       77 LENGTH-2   PIC S9(9) USAGE BINARY.
       77 STRING-2   PIC X(length-2).
      *           Value data (STORAGE→ HSTRUCT)
       77 VALUE-1    PIC S9(9) USAGE BINARY.
      *           Size of value data
       77 SIZE-1     PIC S9(9) USAGE BINARY.
      *           Success indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

WinWriteProfileString - WMWPST

```
       CALL "WMWPST" USING     HAB, LENGTH-1, STRING-1, LENGTH-2, STRING-2, LENGTH-3, STRING-3,
                               SUCCESS.

      *           Anchor block handle
       77 HAB        PIC S9(9) USAGE BINARY.
      *           Text string
       77 LENGTH-1   PIC S9(9) USAGE BINARY.
       77 STRING-1   PIC X(length-1).
      *           Text string
       77 LENGTH-2   PIC S9(9) USAGE BINARY.
       77 STRING-2   PIC X(length-2).
      *           Text string
       77 LENGTH-3   PIC S9(9) USAGE BINARY.
       77 STRING-3   PIC X(length-3).
      *           Success indicator
       77 SUCCESS    PIC S9(9) USAGE BINARY.
```

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